

FIFTEENTH  
*Murray & Gibb*  
ANNUAL REPORT

OF THE

REGISTRAR-GENERAL

ON THE

BIRTHS, DEATHS, AND MARRIAGES

REGISTERED IN

SCOTLAND

DURING THE

YEAR 1869;

AND

FIFTH ANNUAL REPORT

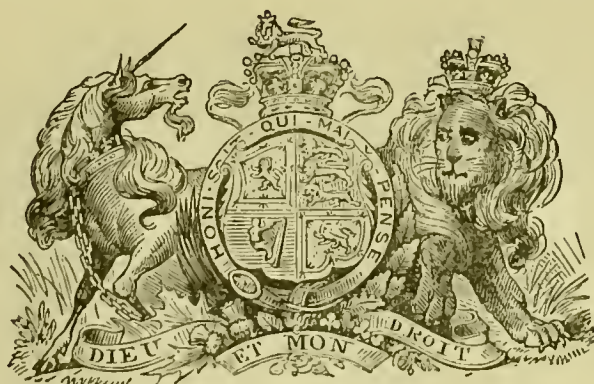
ON

VACCINATION.

---

Presented to both Houses of Parliament by Command of Her Majesty.

---



EDINBURGH:

PRINTED BY MURRAY AND GIBB,

FOR HER MAJESTY'S STATIONERY OFFICE.

1870.



Digitized by the Internet Archive  
in 2016

<https://archive.org/details/b28040466>

# CONTENTS.

---

	PAGE
Report of the Registrar-General to the Secretary of State for the Home Department, . . . . .	5
Report to the Registrar-General, by Dr Stark, . . . . .	7

## SCOTLAND.

Increase of Population, . . . . .	9
Births registered in Scotland during the year 1869; the Average Scottish Birth-rate; the Proportion of Births in the Town and Rural Districts; Illegitimate Births; Proportion of Boys to Girls, etc.; with relative Tables, . . . . .	10
Summary of Facts ascertained with regard to Illegitimacy in Scotland, . . . . .	12
Deaths registered in Scotland during the year 1869; the Average Scottish Death-rate; the Proportion of Deaths in the Town and Rural Districts; with relative Tables, . . . . .	17
Marriages registered in Scotland during the year 1869; the Average Scottish Marriage-rate; the Proportion of Marriages in the Town and Rural Districts, . . . . .	19

## EIGHT PRINCIPAL TOWNS.

Births in the Eight Principal Towns of Scotland during the year 1869, with the Mean Annual Proportion of Births, and the relative Birth-rate in each Town; the Proportion of Illegitimate Births, and the Sexes at Birth; with relative Tables, . . . . .	19
Deaths in the Eight Towns during the year 1869, with the Mean Death-rate in these Towns, and the Proportional Death-rate in each Town; the Deaths in each Town under 5 years of age, and the Diseases which proved fatal; with relative Tables, . . . . .	21
Marriages in the Eight Towns during the year 1869, . . . . .	28
Weather, and its Influence on the Mortality; with relative Tables, . . . . .	28

## VACCINATION IN SCOTLAND—1868.

Fifth Report on Vaccination in Scotland applicable to the Children born and registered during the year 1868; showing the Number and Proportion who were successfully vaccinated; the Number whose Vaccination had been postponed, etc. . . . .	37
--	----

## ABSTRACTS.

	PAGE
Births registered in Scotland during each Month of the year 1869, pursuant to the Act 17° and 18° Vict. cap. 80, . . . . .	41
Deaths registered in Scotland during each Month of the year 1869, . . . . .	42
Marriages registered in Scotland during each Month of the year 1869, . . . . .	43
Vaccination in Scotland for the year 1868, pursuant to the Act 26° and 27° Vict. cap. 108, . . . . .	44
Summary of the Deaths from All Causes at Four Periods of Life in the Eight Towns during the year 1869, . . . . .	45
Deaths from All Causes at Four Periods of Life in each of the Eight Principal Towns of Scotland during the year 1869, . . . . .	46
Births in the Eight Principal Towns of Scotland during each Month of the years 1863 to 1869 inclusive, distinguishing the Sexes, . . . . .	50
Illegitimate Births in the Eight Towns during each Month of the years 1863 to 1869 inclusive, . . . . .	51
Marriages in the Eight Towns during each Month of the years 1860 to 1869 inclusive, . . . . .	51
Deaths in the Eight Principal Towns of Scotland during each Month of the years 1863 to 1869 inclusive, distinguishing the Sexes, . . . . .	52
Meteorology of the Eight Principal Towns of Scotland during each Month of the year 1869, . . . . .	53
Births, Deaths, and Marriages registered during 1869 in the Town and Landward portions respectively of all the Burghal Districts of Scotland, . . . . .	54

---

 APPENDIX.

Extracts from Registrars' Notes, relative to the working of the Vaccination Act, . . . . .	56
--	----



# R E P O R T.

---

TO THE

R I G H T H O N<sup>B L E.</sup> H. A U S T I N B R U C E, M. P.

*Her Majesty's Principal Secretary of State for the Home Department.*

---

GENERAL REGISTRY OFFICE OF BIRTHS, ETC.,  
EDINBURGH, *March 25, 1870.*

SIR,

I HAVE the honour to submit to you a General Abstract of the Births, Deaths, and Marriages registered in Scotland during the year 1869, in conformity with the requirements of the Scottish Registration Act (17° and 18° Vict. c. 80), in order that the same may be laid before Parliament.

As in my former Reports, I have directed that this Abstract should be accompanied by a short explanatory statement as to the health of the population during the year, the diseases which were prevalent, and the causes which seemed to affect the proportions of the Births, Deaths, and Marriages.

From the mode in which we divide Scotland into districts, according to the density of the population, I have been enabled to prove that density of population increases the Births and Marriages nearly in the exact ratio that it increases the Deaths. This is a most important fact, as bearing on the question of sanitary reform, and one to which I wish to direct your attention.

As the period is now approaching when preparations must be made for taking the Census of the people in 1871, and it is desirable to make any inquiries which may throw light on various social questions, I have directed that in this Report there should be given a summary of the various facts which have been ascer-

tained as to the prevalence and supposed causes of illegitimacy in Scotland.

The year 1869 having proved quite an exceptional one, both with regard to its high mortality and its meteorological phenomena, I directed that special attention should be paid to that subject, with the view of tracing the causes which led to the excessive Death-rate. Several additional Tables are therefore added to this Report, with the view of throwing light on the subject.

In terms of the Nineteenth Section of the Scottish Vaccination Act (26° and 27° Vict. c. 108), I have also the honour to submit to you my Fifth Annual Report on Vaccination, containing a general abstract of the number of children born during 1868 who have been successfully vaccinated, who were insusceptible of the vaccine disease, whose vaccination was postponed, who died before vaccination, and the other particulars required by the Statute.

The success of the Scottish Vaccination Act may be said to be nearly as complete as any legislative enactment could effect, inasmuch as 97·5 per cent. of the children born during the year 1868 have been protected by vaccination, or are otherwise accounted for under the provisions of the Statute. Under its operation, also, Small-pox has greatly diminished; so that it may be said, that for the last five years the mortality from Small-pox has been very much lower in Scotland than during any previous period of which we have any knowledge. The introduction of a few important amendments would remove most of the hardships at present complained of, to some of which I have made special allusion in my former Reports.

I have the honour to be,

SIR,

Your obedient Servant,

W. PITT DUNDAS,  
*Registrar-General.*



# REPORT TO THE REGISTRAR-GENERAL,

BY JAMES STARK, M.D., F.R.S.E.

SIR,

THIS Report refers to the Births, Deaths, and Marriages registered during the year 1869 in the 1016 districts into which Scotland was that year divided for the purposes of registration, and also to the vaccination of the children whose births were recorded during the year 1868.

113395 Births, 75789 Deaths, and 22083 Marriages were entered on the registers of Scotland during the year referred to; and when these numbers are compared with the estimated population, it appears that the proportion of births and of marriages was below the mean of the ten previous years, while the proportion of deaths was considerably above it. As compared with the year 1868, there were 2278 fewer births, 6403 more deaths, and 230 more marriages.

When these Reports were first commenced, with the view of aiding sanitary inquiries, and, if possible, of discovering the laws which regulate the proportion of births, deaths, and marriages, and discovering whether these events bore any relation to each other, the districts of Scotland were divided into two groups, viz.:—1st, TOWN DISTRICTS, embracing all the districts which contained towns with a population of 3000 and upwards; and 2d, RURAL DISTRICTS, embracing the remainder of Scotland. Year after year it was found that the closest possible relation existed between the births, deaths, and marriages in each of these groups of districts; for

TABLE I.—Population of Scotland, estimated to the middle of each year; Births, Deaths, and Marriages registered during each year from 1855 to 1869 inclusive; the Illegitimate Births, and the excess of Births over Deaths; also the Per-centage of Births, Deaths, and Marriages to the Population.

YEAR.	Population estimated to the Middle of each Year.	BIRTHS.		DEATHS.	MAR-RIAGES.	Excess of Births over Deaths.	Proportion to every 100 Persons living.		
		Total.	Illegit.				Births.	Deaths.	Marriages.
1855	2,978,065	93,349	7,357	62,004	19,680	31,345	3·134	2·082	0·660
1856	2,995,771	101,821	8,695	58,529	20,740	42,291	3·395	1·953	0·692
1857	3,012,310	103,415	8,859	61,906	21,369	41,509	3·433	2·055	0·709
1858	3,027,665	104,018	9,354	63,539	19,655	40,479	3·435	2·098	0·649
1859	3,041,812	106,543	9,715	61,714	21,201	44,829	3·502	2·028	0·697
1860	3,054,738	105,629	9,736	68,170	21,225	37,459	3·457	2·231	0·695
1861	3,066,633	107,009	9,929	62,341	20,896	44,668	3·484	2·032	0·681
1862	3,083,989	107,069	10,376	67,195	20,597	39,874	3·471	2·178	0·667
1863	3,101,345	109,341	10,948	71,481	22,234	37,860	3·525	2·305	0·716
1864	3,118,701	112,333	11,197	74,416	22,725	37,917	3·602	2·386	0·728
1865	3,136,057	113,070	11,262	70,891	23,611	42,179	3·605	2·260	0·753
1866	3,153,413	113,667	11,673	71,348	23,688	42,319	3·604	2·263	0·751
1867	3,170,769	114,044	11,148	69,068	22,618	44,976	3·593	2·177	0·710
1868	3,188,125	115,673	11,266	69,386	21,853	46,287	3·628	2·176	0·685
1869	3,205,481	113,395	11,023	75,789	22,083	37,606	3·537	2·364	0·689



while all were uniformly high in the Town, all were uniformly low in the Rural Districts. The year just closed was no exception to this rule, for in the 131 Town Districts, for every ten thousand persons there occurred the proportion of 388 births, 285 deaths, and 82 marriages; while in the Rural Districts the proportion was only 311 births, 175 deaths, and 51 marriages.

These facts show, in a general way, that life wore out more rapidly in the towns than in the country; but that to supply this greater waste of life, there were more marriages and more births, so that a perfect compensation was maintained.

The progress of knowledge, however, rendered it imperative to ascertain whether in all cases the proportion of births, deaths, and marriages kept pace with the density of the population, or rather with the size of the mass of human beings congregated together. To eliminate this important point, the districts of Scotland were divided into four groups:—1st, **PRINCIPAL TOWNS**, each of which have above 25,000 inhabitants; 2d, **LARGE TOWNS**, each of which have from 10,000 to 25,000 inhabitants; 3d, **SMALL TOWNS**, each of which have from 3000 to 10,000 inhabitants; and 4th, **RURAL DISTRICTS**, which embrace the remaining districts of Scotland. It then appeared that the proportion of births, deaths, and marriages in each of these four groups of districts rose with the density of the population,—that the proportion of all was highest in the Principal Towns, was next highest in the Large Towns, smaller in the Small Towns, but lowest of all in the Rural Districts.

Thus, in 1869, for every ten thousand persons in each of these groups, there occurred the proportion of 408 births, 325 deaths, and 94 marriages in the Principal Towns; 383 births, 276 deaths, and 75 marriages in the Large Towns; 351 births, 222 deaths, and 63 marriages in the Small Towns; but only the low proportion of 311 births, 175 deaths, and 51 marriages in the Rural Districts. (Tables V. and VI.)

A ten years' abstract of the births, deaths, and marriages in Scotland, viz. for the years 1856–1865, showed the same fact—that all these events occurred in each of the four groups of districts according to the density of the population. Thus, during these ten years, for every ten thousand persons in each of these four groups there occurred 387 births, 282 deaths, and 89 marriages in the Principal Towns; 380 births, 245 deaths, and 79 marriages in the Large Towns; 364 births, 212 deaths, and 69 marriages in the Small Towns; but only 314 births, 169 deaths, and 56 marriages in the Rural Districts.\*

TABLE II.—Population of Scotland estimated to the middle of each year from the Excess of Births over Deaths, deducting Emigrants, and the Per-centage of Births, Deaths, and Marriages to that Population; also, the Annual Increase or Decrease of Births, Deaths, and Marriages.

YEAR.	Population estimated.	Yearly Increase of Population.	Emigrants.	Per-centage to Population.			Annual Increase or Decrease.		
				Births.	Deaths.	Marriages.	Births.	Deaths.	Marriages.
1861	3,066,633	35,694	8,974	3·484	2·032	0·681	+1380	—5829	— 329
1862	3,102,327	24,769	15,105	3·451	2·166	0·664	+ 60	+4854	— 299
1863	3,127,096	20,880	16,980	3·496	2·286	0·711	+2272	+4286	+1637
1864	3,147,976	22,523	15,394	3·568	2·364	0·721	+2992	+2935	+ 491
1865	3,170,499	28,902	13,277	3·566	2·235	0·744	+ 737	—3525	+ 886
1866	3,199,401	29,504	12,815	3·552	2·230	0·740	+ 597	+ 457	+ 77
1867	3,228,905	31,578	13,398	3·532	2·138	0·700	+ 375	—2280	—1070
1868	3,260,483	30,848	15,439	3·547	2·128	0·670	+1629	+ 318	— 765
1869	3,291,331	14,513	23,093	3·445	2·302	0·668	—2278	+6403	+ 230

\* See *Thirteenth Detailed Annual Report of Registrar-General of Scotland*, p. xvi., Tables XIV. and XV.



These facts, then, seem to prove, that it is a law of nature that births, deaths, and marriages are equally influenced by density of population.

POPULATION.

In a small country like Scotland, where the known emigration to America and the Colonies, and the unknown emigration to England, Ireland,

TABLE III.—Number of Births, Deaths, and Marriages in Scotland, and their Proportion to the Population, estimated to the middle of each year, during each Quarter of the Years 1859 to 1869 inclusive.

	1859.		1860.		1861.		1862.		1863.		1864.		1865.		1866.		1867.		1868.		1869.	
	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.
FIRST QUARTER.																						
Births, .....	25988	3.42	27118	3.55	25400	3.30	27089	3.51	26733	3.44	28049	3.61	28594	3.65	28883	3.66	27952	3.52	28736	3.60	28429	3.54
Deaths, .....	17102	2.25	20223	2.65	17944	2.33	19420	2.51	19229	2.47	22605	2.89	20804	2.65	19095	2.42	19977	2.51	18036	2.26	20431	2.54
Marriages, .....	4890	0.64	4802	0.63	4636	0.61	4763	0.62	5126	0.66	5346	0.68	5416	0.69	5642	0.71	5356	0.66	5287	0.66	5291	0.66
Mean Temperat.	41.0		36.0		38.9		38.8		40.9		35.7		35.3		38.0		56.5		40.6		40.0	
SECOND QUARTER.																						
Births, .....	28510	3.76	28292	3.71	29200	3.80	28728	3.73	29655	3.82	29964	3.84	30318	3.86	29808	3.78	30375	3.83	31025	3.89	29472	3.67
Deaths, .....	15653	2.06	18182	2.38	15947	2.07	17385	2.25	17963	2.31	18473	2.36	17074	2.17	18575	2.35	17475	2.20	16928	2.12	19449	2.42
Marriages, .....	5150	0.67	5329	0.69	5327	0.69	5185	0.67	5594	0.71	5723	0.73	5707	0.72	6034	0.76	5627	0.70	5660	0.71	5596	0.69
Mean Temperat.	50.1		48.2		50.6		49.4		49.0		49.9		51.5		49.3		49.0		51.0		48.4	
THIRD QUARTER.																						
Births, .....	25956	3.42	24914	3.26	26146	3.41	25783	3.34	26366	3.40	27035	3.47	27306	3.48	27204	3.45	27870	3.51	28393	3.56	27646	3.44
Deaths, .....	13340	1.76	13875	1.82	13415	1.74	14235	1.84	16273	2.09	16159	2.06	15924	2.02	15470	1.95	15125	1.90	16662	2.09	16532	2.06
Marriages, .....	4626	0.61	4514	0.59	4480	0.59	4570	0.59	4900	0.62	5005	0.64	5343	0.68	5104	0.64	5071	0.63	4804	0.59	4870	0.60
Mean Temperat.	56.4		53.9		56.0		54.4		53.9		54.5		57.5		54.4		55.2		57.4		56.4	
FOURTH QUARTER.																						
Births, .....	26089	3.44	25305	3.31	26263	3.42	25469	3.30	26587	3.42	27185	3.49	26852	3.42	27772	3.52	27847	3.51	27519	3.45	27848	3.47
Deaths, .....	15619	2.06	15890	2.08	15035	1.95	16155	2.09	18016	2.32	17179	2.19	17089	2.17	18210	2.30	16491	2.07	17760	2.22	19377	2.42
Marriages, .....	6535	0.86	6580	0.86	6453	0.84	6079	0.78	6614	0.84	6651	0.85	7145	0.91	6908	0.87	6564	0.82	6202	0.77	6326	0.78
Mean Temperat.	39.7		39.7		42.0		42.0		43.6		42.0		43.4		43.5		42.3		41.5		40.9	
YEAR.																						
Population, ...	3041812		3054738		3066632		3083989		3101345		3118701		3136057		3153413		3170769		3188125		3205481	
Births, .....	106543	3.50	105629	3.46	107009	3.48	107069	3.47	109341	3.52	112333	3.60	113070	3.60	113667	3.60	114044	3.59	115673	3.63	113395	3.53
Deaths, .....	61714	2.03	68170	2.23	62341	2.03	67195	2.17	71481	2.30	74416	2.38	70891	2.26	71350	2.26	69068	2.17	69386	2.17	75789	2.36
Marriages, .....	21201	0.69	21225	0.69	20896	0.68	20597	0.66	22234	0.71	22725	0.72	23611	0.75	23688	0.75	22618	0.71	21853	0.68	22083	0.69



etc., bears such a large proportion to the population, the estimated population towards the close of the decennial period since last Census was taken must be regarded as merely an approximation to the truth. To allow, however, of every one making what corrections he pleases on our estimate, and also to show how the proportions of births, deaths, and marriages would look when the population is differently estimated, there is appended another Table (Table II.), which shows what the number of the population would be during each year from 1861 to 1869 were the ascertained emigrants deducted from the excess of births over deaths. This Table, of course, makes no allowance for the large migration to England and Ireland, the continent of Europe or India, nor for the drafts to the army and navy. By our adopted mode of estimation, the population of Scotland at the middle of the year 1869 would amount to 3,205,481 persons. By the system adopted for Table II., it would amount to 3,291,333 persons. The actual population is probably something between these numbers.

BIRTHS.

113395 Births were registered in Scotland during the year 1869,—a number lower than that of the three previous years, but just what might have been expected from the diminution of marriages during the years 1867 and 1868. During the ten years 1859–1868, the mean annual birth-rate was in the proportion of 354 births in every ten thousand persons of the estimated population, or 3·54 per cent.; but during the year 1869 the proportion was 353 births in a like population, or 3·53 per cent.

Of these 113395 births, 976306 were registered in the Principal Towns, 277658 in the Large Towns, 535408 in the Small Towns, and 1425109 in the Rural Districts; giving for every thousand persons in each of these groups a proportion of 40 births in the Principal Towns, 38 births in the Large Towns, 35 births in the Small Towns, but only 31 births in the Rural Districts. (Tables V. and VI.) The influence of density of population on the births was therefore most strongly marked.

Even the Eight Divisions of Scotland showed, in a general way, the influence of density of population on the births. Thus, in the North-Western Division, with 23 persons to a square mile, there were 26 births to every thousand persons; in the Southern Division, with 66 persons to

TABLE IV.—Estimated Population, with the Births, Deaths, and Marriages registered in each of the Eight Divisions of Scotland during the Year 1869, and their Proportion to the Population.

DIVISIONS.	Population estimated to middle of 1869.	BIRTHS.		DEATHS.		MARRIAGES.	
		Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
Northern . . . . .	133,218	3134	2·35	2034	1·52	568	0·42
North-Western . . . . .	160,399	4222	2·63	2890	1·80	706	0·44
North-Eastern . . . . .	381,971	12811	3·35	6536	1·71	2223	0·57
East Midland . . . . .	530,305	18170	3·42	12077	2·27	3526	0·66
West Midland . . . . .	243,381	8078	3·19	5421	2·22	1415	0·58
South-Western . . . . .	1,113,163	44565	4·00	32146	2·88	9058	0·81
South-Eastern . . . . .	430,197	16022	3·72	10825	2·51	3446	0·80
Southern . . . . .	212,847	6393	3·00	3860	1·81	1141	0·53



a square mile, there were 30 births to every thousand persons ; in the North-Eastern Division, with 96 persons to a square mile, there were 33 births to every thousand persons ; in the East-Midland Division, with its 119 persons to a square mile, there were 34 births to every thousand persons ; in the South-Eastern Division, with 219 persons to a square mile, there were 37 births to every thousand persons ; while in the populous South-Western Division, with 441 persons to every square mile, there were 40 births to every thousand persons. (Table IV.)

Of the 113395 births, 102372 were legitimate and 11023 illegitimate, —indicating that 9·7 per cent. of the births were illegitimate. As usual, the proportion of illegitimate births was lower in the Town than in the Rural Districts. Thus, in the Principal Towns, 9·7 per cent. of the births were illegitimate, 7·5 per cent. in the Large Towns, 9·7 per cent. in the Small Towns, but 10·2 per cent. in the Rural Districts. It is singular that year after year the proportion of illegitimate births in the North-Eastern and Southern Divisions continues so very much above that of all the others ; for while only 6·4 per cent. of the births were illegitimate in the North-Western, 7·3 per cent. in the Northern, and 8·3 per cent. in the

TABLE V.—Births, Illegitimate Births, Deaths, and Marriages in the Town and Rural Districts of Scotland in 1869, distinguishing the Sexes.

	ESTIMATED POPULATION, 1869.			TOTAL BIRTHS.			ILLEGIT. BIRTHS.	DEATHS.			MAR- RIAGES.
	Males.	Females	Both Sexes.	Males.	Fem.	Both Sexes.		Males.	Fem.	Both Sexes.	
Principal Towns . .	445005	522301	967306	20210	19298	39508	3841	15749	15708	31457	9159
Large Towns* . . .	129939	147719	277658	5417	5219	10636	796	3644	3834	7478	2196
Small Towns* . . .	252901	282507	535408	9755	9166	18821	1830	6032	5881	11913	3393
Total Town Districts .	827845	952527	1,780,372	35382	33683	69065	6467	25425	25423	50848	14748
Rural Districts . . .	683358	741751	1,425,109	23014	21316	44330	4556	12446	12495	24941	7335
SCOTLAND . . .	1,511,203	1,694,278	3,205,481	58396	54999	113395	11023	37871	37918	75789	22083

TABLE VI.—Per-centage and Proportion of Births, Deaths, and Marriages to the Population in the Town and Rural Districts of Scotland in 1869 ; also, the Per-centage of Illegitimate to the Total Births.

	Per-centage to Population.							Per-cent. of Illegit. to Total Births.	Proportion to Population.						
	Births.			Deaths.			Marriages.		Births, One to every.			Deaths, One to every			Marriages, One to every
	Mal.	Fem.	Both Sexs.	Mal.	Fem.	Both Sexs.			Mal.	Fem.	Both Sexs.	Mal.	Fem.	Both Sexs.	
Principal Towns .	4·54	3·69	4·08	3·53	3·00	3·25	0·94	9·7	22	26	24	28	33	30	105
Large Towns . .	4·16	3·53	3·83	2·80	2·59	2·76	0·75	7·5	24	28	26	36	38	37	126
Small Towns . .	3·85	3·24	3·51	2·38	2·08	2·22	0·63	9·7	26	30	28	42	47	45	158
Total Town Districts .	4·27	3·53	3·88	3·07	2·66	2·85	0·82	9·3	24	28	26	32	37	35	121
Rural Districts . .	3·36	2·87	3·11	1·82	1·68	1·75	0·51	10·2	30	35	32	55	59	57	194
SCOTLAND .	3·86	3·24	3·53	2·50	2·23	2·36	0·69	9·7	25	30	28	39	44	42	145

\* The Large Towns have Populations from 10,000 to 25,000 persons. The Small Towns have Populations from 3,000 to 10,000 persons.



populous manufacturing, mining, and commercial South-Western Division, 14·6 per cent. of the births were illegitimate in the North-Eastern, and 15·4 per cent. in the Southern Divisions. It would be well that the probable causes of this very high rate of illegitimate births should be thoroughly inquired into.

As the approaching Census of the population will afford a favourable opportunity for investigating facts which throw light on various social problems, it may not be out of place to give a summary of the conclusions which have been already arrived at in these Reports, relative to various causes which were considered to influence the proportion of illegitimate births. The full details on which these conclusions were founded were published in the Detailed Annual Reports for the years 1855 to 1860 inclusive.

We have always maintained that illegitimacy in Scotland is different from illegitimacy on the Continent of Europe, inasmuch as it presents some features which seem to indicate that it has its origin in a different condition of the social relations. Thus, in all the kingdoms of the Continent of which we possess statistics, the illegitimate births are low in the Rural Districts, but rise to enormous dimensions in the Towns. Thus, in France, while only 4 per cent. of the births are illegitimate in the Rural Districts, 20 per cent. are illegitimate in the Towns, and from 27 to 32 per cent. in Paris. In Belgium, while only 5·7 per cent. of the births are illegitimate in the Rural Districts, 13·6 per cent. are illegitimate in the Towns, and 31·8 per cent. in Brussels. In Sweden, while only 7·8 per cent. of the births are illegitimate in the Rural Districts, 24·2 per cent. are illegitimate in the Towns, and 41·2 per cent. in Stockholm. In the Austrian Empire, in 1856, 13 per cent. of the births were illegitimate; but in Lower Austria, which includes Vienna, 47 per cent. of the births were illegitimate.

All this is opposed to the facts ascertained with regard to illegitimacy in Scotland; for a ten-yearly period shows that illegitimacy is less prevalent in the Towns than in the Rural Districts, seeing that only 9·0 per cent. of the births were illegitimate in the Towns, but 9·9 per cent. in the Rural Districts.

Again, on the Continent of Europe it has been invariably found that the proportion of males to females in the illegitimate births was much smaller than what occurred in the legitimate births. Thus, in Belgium, 105·5 males are born to every 100 females in the legitimate births, but only 102·5 males to every 100 females in the illegitimate births. In France, 105·5 males are

TABLE VII.—Proportion of Illegitimate to every 100 Births in Scotland, its Divisions and Counties, during 1869.

DIVISIONS.	Per Cent. of Illegit.	Counties.	Per Cent. of Illegit.	Counties.	Per Cent. of Illegit.	Counties.	Per Cent. of Illegit.
SCOTLAND.	9·7						
NORTHERN DIVISION	7·3	Shetland .....	4·1	Forfar .....	11·4	Lanark .....	8·4
NORTH-WESTERN Do.	6·4	Orkney .....	6·2	Perth .....	10·2	Linlithgow .....	8·4
NORTH-EASTERN Do.	14·6	Caithness .....	10·3	Fife .....	7·5	Edinburgh .....	8·9
EAST-MIDLAND Do.	9·8	Sutherland .....	7·1	Kinross .....	9·1	Haddington ....	10·3
WEST-MIDLAND Do.	7·8	Ross & Cromarty	4·0	Clackmannan	9·3	Berwick .....	11·3
SOUTH-WESTERN Do.	8·3	Inverness .....	8·8	Stirling .....	8·3	Peebles .....	11·6
SOUTH-EASTERN Do.	9·2	Nairn .....	11·9	Dumbarton .....	6·9	Selkirk .....	10·1
SOUTHERN Do.	15·4	Elgin .....	15·8	Argyll .....	7·9	Roxburgh .....	12·6
		Banff .....	16·2	Bute .....	7·7	Dumfries .....	16·6
		Aberdeen .....	14·2	Renfrew .....	7·1	Kirkcudbright	14·8
		Kincardine .....	14·1	Ayr .....	9·3	Wigtown .....	18·1



born to every 100 females in the legitimate births, but only 103·3 males to every 100 females in the illegitimate births. In Sweden, 106·0 males are born to every 100 females in the legitimate births, but only 103·5 males to every 100 females in the illegitimate births.

In Scotland this is reversed, the proportion of males in the illegitimate births exceeding that of the males in the legitimate births. Thus, take the thirteen years 1855 to 1867, 105·4 males were born to every 100 females in the legitimate births, but 106·7 males to every 100 females in the illegitimate births.

It was pointed out in our First Detailed Annual Report, and every subsequent year has confirmed the conclusion, that the illegitimate births were almost entirely confined to the lower, that is, to the labouring and working classes; and that the mothers of such children consisted chiefly of those employed about farms or in agricultural labour, of factory girls, of domestic servants, and those engaged in needlework and in shops. Private investigations showed, that in numerous instances the parents of these illegitimate children were true to each other, that the woman had borne several children to the same man, and that frequently these children were legitimated by the subsequent marriage of the parents. By this law, not only was the proportion of illegitimate persons in the population reduced, but possibly one of the strongest motives to infanticide was removed, inasmuch as the woman may have lived in the hope that the birth of the child would eventually be the means of inducing its father to marry her, and thus legitimate their offspring.

In so far as the registers could show such a fact, it was ascertained that in the great majority of cases the father of the illegitimate child belonged to the same rank as the mother; and this agrees with the observation of independent inquirers who have turned their attention to this subject.

In our Tenth Detailed Annual Report was given a Table showing the proportion of illegitimate births in every division and county of Scotland during the ten years 1855–1864. This Table, when compared with the proportion of those able to sign their names in writing in the marriage registers, confirms the conclusion drawn in former Reports, that there is no traceable connection between the ignorance, or want of education, among the people, and the proportion of illegitimacy. Indeed, instead of the uneducated counties showing the highest proportion of illegitimate births, it was rather the reverse, seeing that the counties in which the proportion of illegitimate births was highest, were also those in which the highest proportion of men and of women were able to sign their names in writing in the marriage registers. Thus, in Ross and Cromarty, where only 3·9 per cent. of the births were illegitimate, only 60 per cent. of the men, and 45 per cent. of the women were able to sign their names in writing. In Inverness, where 7·6 per cent. of the births were illegitimate, only 71 per cent. of the men, and 53 per cent. of the women were able to sign their names in writing. In Lanark, where 7·4 per cent. of the births were illegitimate, only 84 per cent. of the men, and 69 per cent. of the women were able to sign their names in writing. On the other hand, in Aberdeen, where 15·3 per cent. of the births were illegitimate, 97 per cent. of the men, and 92 per cent. of the women were able to sign their names in writing. In Banff, where 15·5 per cent. of the births were illegitimate, 96 per cent. of the men, and 85 per cent. of the women signed their names. And in Dumfries, where 14·4 per cent. of the births were illegitimate, 97 per cent. of the men, and 95 per cent. of the women were able to adhibit their signatures in the registers.



These striking facts, then, seem to prove that the large proportion of illegitimacy in these highly educated counties is not a sin resulting from ignorance and debasement; for every one who is acquainted with these counties knows how intelligent are the natives, and that in other respects they are of a somewhat higher cast than the generality of the inhabitants of those counties where illegitimacy is not nearly so prevalent.

It is by no means easy to arrive at definite conclusions relative to the effect of proportion of marriages on illegitimacy, because another element comes into consideration, viz. the fact that the proportion of marriages is increased by density of population. Allowing for this, however, it appears that the counties and divisions in which illegitimacy occurs to the highest extent are those in which the proportion of marriages is low. Thus, if we contrast the North-Eastern and Southern Divisions of Scotland, in which above 14 per cent. of the births are usually illegitimate, with the South-Western and South-Eastern Divisions, in which only from 7 to 8 per cent. of the births are illegitimate, we shall find that the proportion of marriages in the North-Eastern and Southern Divisions was only 63 and 55 marriages respectively in every ten thousand persons, whereas in the South-Western and South-Eastern Divisions they were in the proportion of 80 and 81 marriages respectively in every ten thousand persons.

These facts seem to indicate, that in certain counties of Scotland some prudential or other checks to marriage must prevail; and it is believed that a considerable amount of the illegitimacy which these counties exhibit is the result of something approaching to concubinage, although in most instances where such a connection subsists the parties do not actually live together.

Much of the illegitimacy prevailing in certain counties was at one time attributed to the existence of what are called bothies, that is, houses apart from the farm-house, in which the male and female workers on the farm are separately lodged. These bothies only exist on the large farms, and if they had any influence in increasing the illegitimacy, the proportion of illegitimate births would have been found to be highest in those counties which had the largest arable farms. It is a known fact that the smaller the size of the farm the more it is worked with the assistance of young unmarried men and women, who are fed in the house, and sleep either in the house or in the stable-loft or offices. It is only on the large farms that married men are employed; so that, in many districts, so soon as a young man marries he loses his situation as a ploughman, and is forced to become a daily labourer, dependent on his daily work for his bread. This, of course, acts as a strong check on his openly marrying.

An official return was published in 1857, which, to a certain extent, enables us to trace the effect of the size of the farm on the proportion of illegitimate births in each county of Scotland; and it is instructive to note that, in a general way, the illegitimacy was found to be highest in those counties in which the smallest farms occurred. Thus, in Banff, the farms paying £20 and upwards of annual rent, only averaged 64 acres each, and 15·5 per cent. of the births were illegitimate annually. In Aberdeen, the farms paying £20 and upwards of rent, only averaged 66 acres in extent, and 15·3 per cent. of the births were annually illegitimate. In Dumfries, the average size of the farms paying £20 and upwards was 87 acres only, and the high proportion of 14·4 per cent. of the births was illegitimate annually. In Kirkcudbright, the average size of the farms paying £20 and upwards was 88 acres, and 13·4 per cent. of the births were



illegitimate. Contrast these with a few counties with large farms, where married men are employed, and bothies are, of course, more common. In the county of Edinburgh, the average size of farms paying £20 and upwards was 114 acres, and among the rural population only 8 per cent. of the births were illegitimate. In Fife, the average size of the farms above £20 of yearly rental was 110 acres, and only 7·6 per cent. of the births were illegitimate. In Haddington, the average size of the farms above £20 of yearly rental was 219 acres, and only 8·7 per cent. of the births were illegitimate.

Many years ago an attempt was made to show that ‘the excess of female life is mainly at the root of that evil—illegitimacy.’ Every known fact, however, both with regard to Scotland and other countries, contradicts such a theory. Thus, in the Northern Division of Scotland, which includes the counties of Shetland, Orkney, Caithness, and Sutherland, there were 121 females for every 100 males in 1861. Here, by that theory, the highest proportion of illegitimate births ought to occur; but, on the other hand, no division had such a low proportion, seeing that a ten years’ average shows that only 5·4 per cent. of the births were illegitimate. The North-Western Division contains the next highest proportion of females to males, viz. 114 females to every 100 males; and it contained the second lowest proportion of illegitimate births, viz. 5·7 per cent. of the births.

On the other hand, the two divisions which contain the average Scottish proportion of females to males,—viz. the North-Eastern and Southern Divisions,—viz. 111 females to every 100 males, are those which yielded the highest proportion of illegitimate births, viz. 14·7 and 13·4 per cent. of the births as illegitimate.

But the whole statistics of the Continent of Europe as well as of Scotland prove the same fact—viz. that excess of female life has no effect whatever in increasing illegitimacy.

Thus, Scotland has 111 females to every 100 males in her population, and a ten years’ average shows that 9·1 per cent. of the births are illegitimate.

Denmark has a nearer equality of the sexes than almost any other kingdom, viz. 100·8 females to every 100 males, and 9·3 per cent. of her births are illegitimate.

In Hanover, the sexes are still more nearly equal, viz. 100·3 females to every 100 males, yet 10·1 per cent. of her births are illegitimate.

Austria has only 102·9 females to every 100 males, yet 13 per cent. of her births are illegitimate.

Bavaria has only 103 females to every 100 males, yet 21·9 per cent. of her births are illegitimate.

Saxony has only 104·5 females to every 100 males, yet 14·8 per cent. of her births are illegitimate.

Sweden, which makes the nearest approach of the continental kingdoms to Scotland in the proportion of her sexes, has 106·3 females to every 100 males, and 9·3 per cent. of her births are illegitimate.

Every reliable fact, therefore, fails to establish the theory which ascribes the prevalence of illegitimacy to the excess of female life. Every one knows that the female is far more virtuous and continent than the male; and the converse of the proposition in question would be much nearer the truth.

Many are disposed, not unnaturally, to attach great weight to the insufficiency of house accommodation as one mode of accounting for the prevalence of illegitimacy. It is argued that, where there is insufficient



accommodation for a family, and a necessary impossibility of observing the common decencies of social life, no other result, in regard to the females especially, could be looked for than a loss of that modesty and innate delicacy which are the best safeguards in afterlife. That overcrowding may have a pernicious effect, is what no one probably will be prepared to deny; but a comparison of the returns as to house accommodation with those of illegitimacy in the different divisions and counties of Scotland, seems to show that other causes, as yet unknown, are at work in producing effects so greatly to be deplored.

If the proportion of illegitimate births depended on the amount of house accommodation, it would be found that, in every county or division of Scotland, the proportion of illegitimate births would bear some proportion to that of the number of families living in houses of one room. As we have a perfect return of the house accommodation of all classes in Scotland, we have the data whereby we may estimate the effect which such a state of matters exercises on the point now under consideration; and that return, invaluable in many respects, is in none more remarkable than in proving that the effect of deficient house accommodation in increasing the proportion of illegitimate births is less than is generally supposed.<sup>†</sup>

Thus, a ten years' summary of the proportion of illegitimate births in the divisions and counties of Scotland, shows that by far the highest proportion of illegitimate births occurs in the North-Eastern and Southern Divisions; while the smallest proportion occurs in the Northern and North-Western Divisions, the other four divisions occupying an intermediate place. In the North-Eastern Division, which includes the counties of Nairn, Elgin, Banff, Aberdeen, and Kincardine, only 25·2 per cent. of the families lived in houses of one room, yet 14·7 per cent. of the births were illegitimate; that is to say, that the division which had the very smallest proportion of its inhabitants living in houses of one room, was also the division which year after year yielded the very highest proportion of illegitimate births.

Contrast with this the Northern Division, which includes the counties of Shetland, Orkney, Sutherland, and Caithness. There 36·7 per cent. (being a full third more than in the North-Eastern Division) of the families lived in houses of one room, yet only 5·4 per cent. of the births were illegitimate.

Contrast it even with that division which is the far worst as to house accommodation in all Scotland. In the South-Western Division, which includes the counties of Renfrew, Ayr, and Lanark, no fewer than 40·6 per cent. of the families live in houses of one room; yet, instead of this increasing the proportion of illegitimate births above what they are in the North-Eastern Division, they were not half so numerous, seeing that only 7·5 per cent. of the births were illegitimate in the South-Western Division.

Contrast with each other even the adjoining South-Western and Southern Divisions. The former had 37·1 per cent. of its families living in houses of one room, yet only 8·4 per cent. of its births were illegitimate; the latter had only 34·2 per cent. of its families living in houses of one room, yet 13·4 per cent. of its births were illegitimate.

The influence of the social evil on illegitimacy, either in the way of increasing or diminishing it, we have been unable to trace in Scotland; though in some of our seaport towns, as Leith and Greenock, it certainly seems to have the effect of diminishing the proportion of illegitimate births.

It is thus seen that we are nearly as far as ever from the solution of



the problem as to the causes of illegitimacy, and as to the reason why the proportion in some counties should always be double what it is in others. The non-influence of all the above examined causes seems to point out that the special cause must be sought for in the habits of the people, their greater or lesser addiction to night courtships, to the want of moral training, and to the incontinence of youth, which in some counties finds its legitimate channel in marriage, though it may be in improvident marriage, while in others the prudential check operates so strongly that it leads to that form of non-resident concubinage which results in illegitimacy.

But while the causes of illegitimacy seem at present to be obscure, the extent of the illicit intercourse which leads to the birth of illegitimate children is quite capable of being pretty accurately calculated. Thus, if we take the ten years 1856–1865, and compare the mean annual number of legitimate and illegitimate births with the number of the married and unmarried women at the childbearing ages, viz., from 15 to 45 years of age, we arrive at the following conclusions. During that period the mean number of married women, between the ages of 15 and 45 years, was 305524, and they produced annually 97021 legitimate children, being at the rate of one child for every 3·15 married women at the childbearing ages, or 100 children for every 315 wives. During the same period there were annually born 10004 illegitimate children; and as we may safely assume that the unmarried women who bore these children produced them in the same ratio as the married women, this would show that 31512 unmarried women in Scotland, between the ages of 15 and 45 years, annually put themselves in the way of being mothers, being one in every 13 of the unmarried women between the ages of 15 and 45.

Of the 113395 children born during the year, 58396 were boys and 54999 girls; showing that the proportion of the sexes at birth was 106·1 boys to every 100 girls—a higher proportion of boys than usual, the mean Scottish rate being 105·5 boys to every 100 girls.

The greatest daily number of births occurred during the months of March, April, May, and June, when they averaged from 316 to 333 daily. The lowest number of births occurred during the months of August and September, when they respectively numbered 293 and 291 births daily. (Table XV.)

## DEATHS.

78789 Deaths were registered in Scotland during the year 1869, being 6403 more deaths than occurred during the previous year, and in the high proportion of 236 deaths in every ten thousand persons, or 2·36 per cent. The mean death-rate of the ten previous years was only 219 deaths in every ten thousand persons, or 2·19 per cent., so that the mortality of the year was high above its average.

The mean English death-rate is higher than that of Scotland, being, on a ten years' average, 224 deaths annually in every ten thousand persons, or 2·24 per cent. But during the year 1869, though the death-rate was also above its average, it was not nearly to the same extent as in Scotland, seeing that it was in the proportion of 226 deaths in every ten thousand persons, or 2·26 per cent. Agencies injurious to health were therefore more prevalent in Scotland than in England during 1869.

The Town and Rural Districts of Scotland showed the usual striking



difference in the proportion of deaths. Thus, of the 75789 deaths, 50848 occurred in the Town and 24941 in the Rural Districts, giving a proportion of 285 deaths in every ten thousand persons in the Town, but only 175 deaths in a like population in the Rural Districts. (Tables V. VI. and VIII.)

The influence of density of population on the mortality was, however, most strikingly exhibited when Scotland was divided into four groups of districts according to the size of the towns in each. It then appeared that, for every ten thousand persons in each of these groups, 325 deaths occurred during the year in the Principal Towns, 276 deaths in the Large Towns, 222 deaths in the Small Towns, but only 175 deaths in the Rural Districts.

If these proportions be compared with the mean annual death-rate in the same four groups during the ten years 1856-1865, it will be seen that the increase extended over all the groups. This of itself proves that the determining cause of the increased death-rate was some general influence which acted over all Scotland, though most severely felt in those towns where the population was most crowded, and their general health enfeebled, so that they had less power to resist the deleterious agency. Thus, during the ten years 1856-1865, in every ten thousand persons in each group, there occurred the annual proportion of 282 deaths in the Principal Towns, 245 deaths in the Large Towns, 212 deaths in the Small Towns, and 169 deaths in the Rural Districts.

These are almost the exact proportions in which the deaths occurred in each of these four groups of districts in 1868; and as it is quite impossible to conceive that the sanitary condition of a whole country, and of all its Town and Rural Districts, could have so suddenly deteriorated in 1869 as to give rise to the great increase of mortality during that year, it is only reasonable to ascribe the increase to unfavourable atmospheric conditions, over which man has no control. The very circumstance of the increased mortality affecting the Rural and Small Town Districts as well as the Principal and Large Towns, infallibly leads to this conclusion, even though it is granted that the mortality will in general be proportionally highest where the health of the people is most deteriorated by overcrowding and breathing impure air.

TABLE VIII.—Annual Rate of Mortality per cent. in the Town and Rural Districts of Scotland, during each Quarter of the Years 1859 to 1869.

DISTRICTS.	Population enumerated.		Quarter ending	Annual Per-centage of Mortality in each Quarter of the Years												
	1851.	1861.		1859	1860	1861	1862	1863	1864	1865	1866	1867	1868	Mean Ten Years.	1869	
TOWN DISTRICTS, containing Towns of 3000 Inhabitants and upwards.	1,477,118	1,643,282	March	2·57	3·11	2·71	2·98	2·85	3·46	3·19	2·84	2·93	2·65	2·93	3·07	
			June	2·23	2·70	2·44	2·61	2·71	2·77	2·61	2·76	2·59	2·52	2·59	2·90	
			Sept.	2·00	2·03	2·04	2·14	2·50	2·51	2·48	2·32	2·22	2·59	2·28	2·47	
			Dec.	2·45	2·45	2·33	2·57	2·83	2·67	2·66	2·76	2·52	2·75	2·59	2·96	
			YEAR	2·25	2·57	2·41	2·56	2·72	2·85	2·74	2·67	2·58	2·63	2·59	2·85	
RURAL DISTRICTS, embracing the remainder of Scotland.	1,411,624	1,419,012	March	1·78	1·96	1·42	2·05	2·06	2·25	2·03	1·93	1·75	1·79	1·90	1·89	
			June	1·76	1·86	1·68	1·87	1·86	1·90	1·68	1·87	1·73	1·64	1·78	1·82	
			Sept.	1·38	1·45	1·42	1·52	1·64	1·56	1·50	1·53	1·45	1·49	1·49	1·54	
			Dec.	1·52	1·53	1·55	1·56	1·75	1·66	1·63	1·77	1·55	1·59	1·61	1·72	
			YEAR	1·61	1·70	1·62	1·74	1·83	1·84	1·70	1·78	1·62	1·63	1·70	1·75	



This subject will be examined more closely when noticing the death-rate prevailing in the Eight Principal Towns of Scotland, and the diseases which were the chief agents in giving rise to the high mortality.

## MARRIAGES.

22083 Marriages were registered in Scotland during the year 1869, being 230 more than during the previous year, but 535 fewer than during 1867, and 1605 fewer than during the year 1866. Marriages have therefore been diminishing in number since 1866, and this fact is now being seen in the diminution of the birth-rate. The mean annual marriage-rate during the ten previous years was 70 marriages in every ten thousand persons, but during the year 1869 it was at the rate of 69 marriages to the same population.

As usual, the proportion of marriages contracted in the Town Districts was very much above those in the Rural Districts. Thus, of the 22083 marriages, 14748 were contracted in the Town, and 7335 in the Rural Districts; indicating that, in every ten thousand persons in each of these, 82 marriages occurred in the Town, but only 51 marriages in the Rural Districts.

Like the births and the deaths, however, the proportion of marriages is influenced by the density of the population. Thus, when Scotland was divided into four groups, according to the size of the towns in each, it was found that, for every ten thousand persons in each group, 94 marriages were contracted in the Principal Towns, 75 marriages in the Large Towns, 63 marriages in the Small Towns, but only 51 marriages in the Rural Districts.

---

## EIGHT PRINCIPAL TOWNS OF SCOTLAND.

It is of great importance that the public should get as early information as possible of the birth, death, and marriage rates of those masses of the population which are collected in our Principal Towns. Weekly Reports are therefore issued every Tuesday, giving the number of births, deaths, and marriages registered during the previous week in Glasgow, Edinburgh, Dundee, Aberdeen, Paisley, Greenock, Leith, and Perth; together with the highest, lowest, and mean temperatures at each town, and the respective fall of rain.

Monthly Reports applicable to the Eight Towns are also published, and these are much more valuable, inasmuch as they not only give the mere number of the births, deaths, and marriages, but also the particulars as to the ages of the persons who have died, and the diseases which proved fatal. The public and the authorities are thus kept informed as to the outbreak or progress of every disease affecting the people, within as short a period after



the close of each month as is compatible with the due preparation of the Tables.

In the remainder of this Report there will therefore be given a summary of the births, deaths, and marriages in each of these Eight Towns during 1869. As these towns are well scattered over the country, and have a conjoint population of not much under a third of the population of Scotland, the returns from them enable us to obtain a very fair idea of the kind of diseases which are prevalent, and how far the mortality from these is influenced by local or general causes.

BIRTHS IN THE EIGHT TOWNS.

39515 Births were registered in the Eight Principal Towns of Scotland during the year 1869, being at the high rate of 408 births in every ten thousand persons of the population, or 4·08 per cent. This is a lower proportion than occurred during any of the four previous years, but the diminution is satisfactorily accounted for by the diminution in the number of marriages during the years 1867 and 1868. (Table IX.)

The birth-rate, however, varied much in the several towns, having been highest in Greenock and lowest in Perth. Thus, for every thousand in each of the towns, there occurred in the proportion of 30·5 births in Perth, 36·4 in Paisley, 38·0 in Edinburgh, 41·0 in Glasgow, 41·1 in Aberdeen, 43·5 in Dundee, 45·0 in Leith, but the extremely high proportion of 49·2 births in Greenock. (Table X.)

It is necessary to remark that the proportions of births, deaths, and marriages may be somewhat overrated for Greenock, seeing that there is good reason to believe that the population there during the two past years has been increasing in a more rapid ratio than is allowed for. The strikes among the shipbuilders on the Thames, and elsewhere in England, have caused almost the total transfer of the iron shipbuilding trade to the banks of the Clyde, and the consequent influx of population to Greenock and the neighbouring towns has been without a precedent. The deficient house accommodation, however, and the difficulty of procuring new sites, limit the increase of the population in the town of Greenock itself, so that it may, after all, turn out that the estimated population is not far from the truth.

Of the 39508 births in the Eight Towns, 35667 were legitimate and 3841 illegitimate, indicating that 9·7 per cent. of the births were illegiti-

TABLE IX.—Births, Deaths, and Marriages, and their Proportion to the Population, of the Eight Principal Towns of Scotland during each of the Years 1855 to 1869 inclusive.

YEARS.	Population estimated to the middle of each year.	BIRTHS.		DEATHS.		MARRIAGES.	
		Number.	Per cent. to Population.	Number.	Per cent. to Population.	Number.	Per cent. to Population.
1855	826,648	28,245	3·41	22,740	2·75	6934	0·84
1856	836,633	31,885	3·81	22,248	2·65	7411	0·88
1857	846,628	32,869	3·88	23,361	2·76	7495	0·88
1858	856,613	32,555	3·80	23,420	2·73	6863	0·80
1859	866,698	33,018	3·80	22,345	2·57	7541	0·87
1860	876,683	32,945	3·75	26,028	2·95	7660	0·87
1861	887,450	34,331	3·79	23,130	2·60	7733	0·87
1862	897,432	34,443	3·83	24,965	2·78	7694	0·85
1863	907,414	35,895	3·95	27,030	2·97	8593	0·94
1864	917,396	37,072	4·05	28,828	3·14	8884	0·96
1865	927,378	38,075	4·10	28,499	3·07	9320	1·00
1866	937,360	38,552	4·11	27,448	2·92	9450	1·00
1867	947,342	39,012	4·11	26,511	2·79	8867	0·93
1868	957,324	39,513	4·12	28,031	2·92	8606	0·90
1869	967,306	39,515	4·08	31,450	3·25	9161	0·90



mate. The proportion of illegitimate births, however, varied greatly in the several towns. (Table X.) Thus, in Greenock, only 5·4 per cent. of the births were illegitimate; in Leith, 6·5 per cent.; in Paisley, 9·4; in Glasgow, 9·7; in Perth, 9·8; in Edinburgh, 10·1; in Dundee, 11·4; and in Aberdeen, 11·6 per cent.

Of the children born during the year, 20210 were males and 19298 females; indicating that 104·7 males were born for every 100 females, being a considerably lower proportion of boys than over all Scotland, where the proportion was 106·1 boys to every 100 girls. It has been pointed out in former Reports, that this indicates a lower tone of vitality than in the other districts of Scotland, and thus confirms the conclusions drawn from other circumstances as to the hurtful effects of density of population (or a residence in towns) on human life.

### DEATHS IN THE EIGHT TOWNS.

31450 Deaths were registered in the Eight Towns during the year 1869, being in the very high proportion of 325 deaths in every ten thousand persons,—that is, 32·5 in every thousand, or 3·25 per cent. The average annual death-rate of the fourteen previous years was 282 deaths in every ten thousand persons,—that is, 28·2 in every thousand, or 2·82 per cent. The death-rate has therefore been excessive during the year, and the very highest which has ever been noticed since the Registration Act came into operation in 1855. During the previous year, that of 1868, the mortality was only slightly above the average; but as compared with it, the year 1869 has yielded an excess of 4938 deaths in the Eight Towns, being an increase to the extent of 18·6 per cent. in one year.

By comparing the death-rate in the several towns during each of the past eleven years (Table XI.), it will be seen that the mortality does not rise and fall in each simultaneously; and in former returns it has been pointed out that it almost always happens that different epidemic diseases take the lead in each town. During the past year, when the general mortality in the Eight Towns rose so high above the average, Aberdeen

TABLE X.—Births, Deaths, and Marriages, and their Proportion to the estimated Population, during the Year 1869, in each of the Eight Principal Towns of Scotland; also, the Illegitimate Births, and their Proportion to the Total Births.

TOWNS.	Population estimated to the middle of 1869.	BIRTHS.		ILLEGIT. BIRTHS		DEATHS.		MARRIAGES.	
		Num-ber.	Per Cent. to Pop.	Num-ber.	Per Cent. to Total Births.	Num-ber.	Per Cent. to Pop.	Num-ber.	Per Cent. to Pop.
Glasgow . . . .	450,283	18490	4·10	1808	9·7	15640	3·47	4221	0·93
Edinburgh . . . .	177,696	6755	3·80	681	10·1	5403	3·04	1753	0·98
Dundee . . . . .	101,259	4411	4·35	503	11·4	3562	3·51	919	0·90
Aberdeen . . . . .	75,484	3102	4·11	362	11·6	1784	2·36	682	0·90
Paisley . . . . .	47,427	1737	3·64	164	9·4	1449	3·05	408	0·86
Greenock . . . . .	49,215	2424	4·92	133	5·4	1749	3·55	532	1·08
Leith . . . . .	39,172	1763	4·50	115	6·5	1169	2·95	427	1·09
Perth . . . . .	27,265	833	3·05	82	9·8	694	2·54	219	0·80



exhibited the striking exception of having its death-rate considerably below its own average of the ten previous years; for whereas its mean annual mortality was 26·3 deaths in every thousand persons during these ten years, only 23·6 deaths occurred in a like population in 1869. In all the other towns the death-rate during 1869 exceeded the average of former years.

As usual, the death-rates in the different towns differed greatly from each other, having been lowest in Aberdeen and highest in Greenock. Thus, for every thousand persons in each town, there occurred 23·6 deaths in Aberdeen, 25·4 deaths in Perth, 29·5 deaths in Leith, 30·4 deaths in Edinburgh, 30·5 deaths in Paisley, 34·7 deaths in Glasgow, 35·1 deaths in Dundee, and 35·5 deaths in Greenock.

Of the 31450 persons who died in the Eight Towns during the year, 14070, being 44·74 per cent., were under 5 years of age; 3425, being 10·89 per cent., were between 5 and 20 years of age; 8940, being 28·43 per cent., were between 20 and 60 years of age; while 5014, being 15·94 per cent., were above 60 years of age. (Table XIX.)

These proportions closely correspond to the mean average of deaths at these various ages during a ten-yearly period. Thus, during the ten years 1856-1865, 45·93 per cent. of the persons who died were under 5 years of age, 10·25 per cent. were between 5 and 20 years of age, 27·78 per cent. were between 20 and 60 years of age, while 16·04 per cent. were above 60 years of age. (Table XXI.)

In our eagerness to calculate the mean probabilities of life, and the mean age at death, we are very apt to overlook the startling fact, that in our towns 46 per cent. of the deaths which occur year by year are composed of children under 5 years of age, who know not good from evil.

To arrive, however, at an accurate knowledge of the proportional mortality of children in each town, we must compare the deaths with the living at the same ages. Table XII. shows the numbers living in each town under 5 years of age, the deaths under 5 years, and the per-

TABLE XI.—Per-centage of Deaths in each of the Eight Principal Towns of Scotland during each of the Years 1859-1869.

TOWNS.	Per-centage of Deaths to the Population.											
	1859.	1860.	1861.	1862.	1863.	1864.	1865.	1866.	1867.	1868.	Mean Annual Mortality.	1869.
Glasgow . . . . .	2·83	3·19	2·75	2·86	3·24	3·27	3·28	2·98	2·88	3·11	3·04	3·47
Edinburgh . . . . .	2·19	2·50	2·44	2·77	2·60	2·69	2·78	2·75	2·71	2·70	2·61	3·04
Dundee . . . . .	2·53	3·20	2·60	2·79	2·87	3·25	3·10	3·20	2·98	2·90	2·94	3·51
Aberdeen . . . . .	2·28	2·97	2·40	2·59	2·35	2·87	2·65	3·10	2·43	2·69	2·63	2·36
Paisley . . . . .	2·49	2·90	2·54	2·64	2·56	3·20	2·97	2·83	2·81	2·57	2·75	3·05
Greenock . . . . .	3·34	2·90	2·52	3·06	4·13	4·19	3·59	3·14	2·95	3·41	3·32	3·55
Leith . . . . .	1·98	2·76	2·12	2·38	2·47	2·49	2·52	2·43	2·76	2·51	2·44	2·95
Perth . . . . .	2·24	2·64	2·62	2·35	2·46	3·28	2·73	2·24	2·11	2·30	2·49	2·54

TABLE XII.—Deaths of Children under Five Years of Age in each of the Eight Principal Towns of Scotland, during the Year 1869.

TOWNS.	Number of Children under Five Years of Age, in 1869.	Deaths under Five Years of Age.	Per-cent. of Deaths to Population under Five Years.	TOWNS.	Number of Children under Five Years of Age, in 1869.	Deaths under Five Years of Age.	Per-cent. of Deaths to Population under Five Years.
Glasgow .....	62,507	7539	12·0	Paisley .....	6767	618	9·1
Edinburgh ...	20,738	2156	10·3	Greenock ...	7137	831	11·6
Dundee .....	13,353	1567	11·7	Leith .....	5441	599	11·0
Aberdeen .....	9401	514	5·4	Perth .....	3406	247	7·2



centage of deaths to the living. By that Table it appears that Aberdeen showed the smallest proportional mortality among infants, Glasgow the highest. Thus, for every thousand living children under 5 years of age, there died during the year 54 in Aberdeen, 72 in Perth, 91 in Paisley, 103 in Edinburgh, 110 in Leith, 116 in Greenock, 117 in Dundee, and 120 in Glasgow.

The Zymotic (epidemic and contagious) class of diseases proved fatal to 8278 persons in the Eight Towns, and thus constituted 26·6 per cent. of the mortality. This is a high proportion, but yet very little more than the average zymotic mortality of the whole town districts of Scotland during the ten years 1855–1864. During that period, 26·2 per cent. of the deaths were caused by the zymotic class of diseases. So that high though the mortality has been during 1869 above that of previous years, that single fact proves that the zymotic diseases had only increased in an equal ratio with all other diseases,—in fact, that the causes which produced the high mortality were general causes which affected nearly all classes of diseases alike.

The relative mortality, however, from the zymotic class of diseases varied very much in the several towns, depending greatly on which was the leading epidemic, and whether its type was a severe or a mild one. Thus, only 16·2 per cent. of the deaths were caused by the zymotic class of diseases in Aberdeen, 21·8 per cent. in Edinburgh, 27 per cent. in Paisley, 27·7 per cent. in Glasgow, 28·5 per cent. in Leith, 30·2 per cent. in Greenock, 31 per cent. in Dundee, and 31·4 per cent. in Perth.

In order to point out that it is not the same epidemic which takes the lead in each town, but that the epidemic constitution, whatever it be, is under subjection to local causes, of which as yet we know nothing, we may shortly mention the epidemic diseases which prevailed and took the lead in each town.

In Glasgow, the most fatal of the epidemics was Fever, which caused 1221 deaths, being 7·89 per cent. of the deaths; after that Scarlatina, 895 deaths; then Hooping-cough, 719 deaths; and Measles, 654 deaths;—the mortality of all these being above the usual proportion.

In Edinburgh, Hooping-cough was by far the most fatal of the epidemics, causing 315 deaths, and thus constituting 5·86 per cent. of the mortality; after this came Scarlet Fever, 191 deaths; Fever, 181 deaths; and Diarrhœa, 149 deaths;—the mortality of all these being normal.

In Dundee, Scarlet Fever raged like a plague, causing 669 deaths, or the enormous proportion of 19 per cent. of the deaths; after this came Fever, which caused 140 deaths, constituting 3·97 per cent. of the deaths, or very little more than the normal mortality from that disease. All the other epidemic diseases had a mortality greatly below their average, and only two deaths from Measles occurred during the year.

The fact of one epidemic disease of children, when it rages as a virulent epidemic, taking the place of the others, and throwing them into abeyance, has been frequently remarked in Scotland, and the above is one of the most striking instances which has occurred since the Registration Act came into operation.

In Aberdeen, Fever was by far the most fatal of the epidemics, causing 113 deaths, or 6·40 per cent. of the mortality, being considerably above the town proportion of Fever deaths. Diarrhœa was the next most fatal of the epidemics; but it only caused 44 deaths, or 2·49 per cent. of the mortality. The deaths from Measles, Scarlatina, Diphtheria, and Hooping-cough were very few, and very far below their usual average.



In Paisley, Hooping-cough was the most fatal of the epidemics, causing 128 deaths, or 8·98 per cent. of the mortality; after this came Scarlatina, 86 deaths, being 6·03 per cent. of the mortality, or a third above the normal town average; then followed Fever, 75 deaths, being 5·26 per cent. of the mortality—slightly above the average. The mortality of all the other epidemic diseases was greatly under the average.

In Greenock, Scarlet Fever was the most fatal of the epidemics, causing 150 deaths, or 8·99 per cent. of the mortality—just twice the usual per-centage of that disease. Next followed Fever, causing 101 deaths, or 6·05 per cent. of the mortality; then Diarrhœa, causing 71 deaths, or 4·25 per cent. of the mortality. The mortality of Hooping-cough and Measles was slightly below the average; but Small-pox prevailed to an unusual extent, causing 37 deaths, or 2·22 per cent. of the mortality.

In Leith, Scarlet Fever was by far the most fatal of the epidemics, causing 94 deaths, or 8·09 per cent. of the mortality. Measles caused 62 deaths, being 5·34 per. cent. of the mortality; and Hooping-cough 57 deaths, or 4·91 per cent. of the deaths. All the usual epidemics of children were therefore unusually prevalent in Leith, but the other epidemics were not more fatal than usual.

In Perth, as in Dundee, Scarlatina raged like a pestilence, cutting off 157 persons, and thus constituting the enormously high proportion of 22·82 per cent. of the deaths. To make up for this, the other epidemics of children were in abeyance, so that there were no deaths from Small-pox or Measles,

TABLE XIII.—Per-centage of Deaths from different Diseases to the Population in each of the Eight Principal Towns of Scotland during the Year 1869, allowing for the causes not specified.

DISEASES CAUSING DEATH.	Total Eight Towns.	Glasgow.	Edinburgh.	Dundee.	Aberdeen.	Paisley.	Greenock.	Leith.	Perth.
TOTAL DEATHS .	3·251	3·471	3·040	3·517	2·363	3·054	3·553	2·958	2·545
I. Zymotic Diseases .	0·866	0·963	0·663	1·091	0·383	0·825	1·074	0·850	0·799
III. Tubercular Diseases .	0·535	0·577	0·457	0·578	0·451	0·538	0·669	0·413	0·358
IV. Brain Diseases .	0·265	0·241	0·307	0·245	0·257	0·287	0·228	0·239	0·220
V. Heart, etc., Diseases .	0·126	0·093	0·187	0·135	0·129	0·073	0·174	0·121	0·162
VI. Respiratory Organs .	0·648	0·799	0·588	0·589	0·395	0·394	0·520	0·525	0·296
VII. Digestive Organs .	0·208	0·223	0·188	0·171	0·182	0·248	0·272	0·221	0·140
XII. Debility, Premat. Birth .	0·149	0·159	0·188	0·206	0·092	0·117	0·136	0·154	0·111
XV. Old Age .	0·132	0·100	0·155	0·187	0·146	0·221	0·110	0·123	0·159
XVII. Violent Deaths .	0·099	0·101	0·096	0·104	0·079	0·068	0·134	0·123	0·077
Small-pox . . . .	0·005	0·002	0·000	0·003	0·000	0·008	0·078	0·000	0·000
Measles . . . . .	0·094	0·146	0·063	0·002	0·010	0·053	0·078	0·159	0·000
SCARLATINA . . . .	0·234	0·201	0·108	0·669	0·010	0·141	0·311	0·241	0·580
Diphtheria . . . .	0·019	0·021	0·020	0·017	0·014	0·010	0·017	0·028	0·004
HOOPING-COUGH . .	0·142	0·161	0·178	0·062	0·021	0·274	0·119	0·146	0·025
Croup . . . . .	0·040	0·040	0·039	0·034	0·041	0·012	0·042	0·046	0·044
DIARRHŒA . . . . .	0·074	0·065	0·084	0·085	0·059	0·053	0·151	0·079	0·059
Dysentery . . . . .	0·006	0·003	0·007	0·020	0·009	0·008	0·004	0·007	0·004
Cholera . . . . .	0·005	0·004	0·006	0·017	0·000	0·004	0·006	0·000	0·004
ALL FEVERS . . . .	0·197	0·274	0·102	0·140	0·151	0·160	0·215	0·095	0·051
Viz. Typhus . . . .	0·140	0·213	0·053	0·096	0·090	0·067	0·186	0·033	0·025
Enteric . . . . .	0·045	0·049	0·043	0·031	0·060	0·045	0·023	0·059	0·018
Relapsing . . . .	0·003	0·003	0·002	0·004	0·000	0·008	0·000	0·000	0·000
Continued . . . .	0·002	0·002	0·003	0·002	0·000	0·004	0·002	0·000	0·008
Infantile . . . .	0·007	0·007	0·001	0·007	0·001	0·036	0·004	0·003	0·000
Dropsy . . . . .	0·038	0·035	0·029	0·060	0·028	0·081	0·046	0·031	0·029
Cancer . . . . .	0·045	0·032	0·074	0·040	0·068	0·045	0·042	0·041	0·037
PHTHISIS . . . . .	0·374	0·407	0·309	0·436	0·329	0·347	0·479	0·213	0·225
Apoplexy . . . . .	0·051	0·044	0·062	0·050	0·042	0·087	0·055	0·056	0·059
Paralysis . . . . .	0·068	0·057	0·084	0·063	0·073	0·102	0·070	0·095	0·048
Convulsions . . . .	0·056	0·064	0·053	0·071	0·056	0·023	0·029	0·038	0·033
BRONCHITIS . . . .	0·448	0·571	0·402	0·423	0·277	0·270	0·341	0·377	0·229
Pneumonia . . . . .	0·129	0·166	0·110	0·103	0·069	0·096	0·111	0·102	0·040
Teething . . . . .	0·056	0·058	0·032	0·077	0·055	0·070	0·093	0·046	0·033



only one from Diphtheria, seven from Hooping-cough, and twelve from Croup. Even Diarrhoea and Fever were far less prevalent than usual.

It is only of late years that British physicians have recognised the different forms of Continued Fever, so as to be able to distinguish them; and when they were suddenly startled many years ago with an outbreak of Fever, the leading type of which was the Relapsing, they originated the theory that Fevers were changing their type. For at least a century and a half epidemics of Fever have prevailed over the country, which were sometimes characterized by the majority of the cases being Typhus, at other times Enteric, and at other times Relapsing Fever; but in numerous instances it occurred that all the three forms co-existed in the same epidemic. During 1869, of the 1221 deaths from Fever in the Eight Towns, 948 were from Typhus, 221 from Enteric, 12 from Relapsing, 9 from Simple Continued, and 31 from Infantile Fever, which is a mere variety of Enteric, if indeed it be a variety. It is thus seen that all the various types of Fever are to be met with among the population, and the unknown atmospheric agencies which lead to the outbreak of Fever may cause any one of these at any time to take the lead. In most of the Towns, Typhus was the prevalent form of Fever during 1869; but in Leith, nearly twice as many deaths occurred from Enteric as from Typhus Fever.

Of Diseases of Uncertain Seat in the Eight Towns, Cancer caused 434 deaths, and undefined Dropsy 371. It is somewhat remarkable, that year after year, Edinburgh and Aberdeen seem to furnish twice the proportion of

TABLE XIV.—Per-centage of Deaths from different Diseases to the Total Deaths in each of the Eight Principal Towns of Scotland during the Year 1869, allowing for the causes not specified.

DISEASES CAUSING DEATH.	Total Eight Towns.	Glasgow.	Edinburgh.	Dundee.	Aberdeen.	Paisley.	Greenock.	Leith.	Perth.
I. Zymotic Diseases . . .	26·64	27·74	21·80	31·03	16·21	27·01	30·23	28·51	31·39
III. Tubercular Diseases . .	16·47	16·60	15·03	16·45	19·10	17·61	18·83	13·86	14·01
IV. Brain, etc., Diseases . .	7·88	6·93	10·12	6·96	10·88	9·40	6·41	8·01	9·01
V. Heart, etc., Diseases . .	3·89	2·83	6·16	3·83	5·50	2·38	4·92	4·05	6·39
VI. Respiratory Organs . . .	19·95	23·01	19·37	16·76	16·72	12·91	14·64	17·57	11·62
VII. Digestive Organs . . .	6·44	6·43	6·19	4·86	7·71	8·14	7·68	7·40	5·53
XII. Debility, Premat. Birth .	4·58	4·52	4·35	5·85	3·91	3·86	3·85	5·16	4·36
XV. Old Age . . . . .	4·06	2·88	5·11	5·31	6·17	7·23	3·12	4·13	6·39
XVII. Violent Deaths . . .	3·04	2·90	3·16	2·95	3·34	2·24	3·78	4·13	3·05
Small-pox . . . . .	0·16	0·04	0·00	0·08	0·00	0·28	2·22	0·00	0·00
Measles . . . . .	2·89	4·22	2·10	0·05	0·45	1·75	2·22	5·34	0·00
SCARLATINA . . . . .	7·24	5·78	3·55	19·01	0·45	6·03	8·99	8·09	22·82
Diphtheria . . . . .	0·59	0·60	0·67	0·48	0·62	0·35	0·48	0·94	0·14
HOOPING-COUGH . . . . .	4·37	4·68	5·86	1·76	0·90	8·98	3·35	4·91	1·02
Croup . . . . .	1·23	1·17	1·28	0·96	1·70	1·40	1·20	1·55	1·74
DIARRHOEA . . . . .	2·29	1·88	2·77	2·41	2·49	1·75	4·25	2·67	2·34
Dysentery . . . . .	0·20	0·09	0·22	0·56	0·39	0·28	0·12	0·25	0·14
Cholera . . . . .	0·16	0·11	0·18	0·48	0·00	0·14	0·18	0·00	0·14
All FEVERS . . . . .	6·05	7·89	3·36	3·97	6·40	5·26	6·05	3·19	2·03
Viz. Typhus . . . . .	4·32	6·13	1·73	2·72	3·79	2·17	5·22	1·12	1·01
Enteric . . . . .	1·39	1·43	1·43	0·89	2·55	1·47	0·65	1·98	0·73
Relapsing . . . . .	0·08	0·07	1·07	0·11	0·00	0·28	0·00	0·00	0·00
Continued . . . . .	0·07	0·06	0·09	0·06	0·00	0·14	0·06	0·00	0·29
Infantile . . . . .	0·19	0·20	0·04	0·19	0·06	1·20	0·12	0·09	0·00
Dropsy . . . . .	1·19	1·02	0·97	1·70	1·19	2·66	1·32	1·03	1·16
Cancer . . . . .	1·39	0·93	2·43	1·13	2·89	1·47	1·20	1·37	1·45
PHTHISIS . . . . .	11·49	11·71	10·17	12·39	13·94	11·37	13·49	7·15	8·86
Apoplexy . . . . .	1·58	1·26	2·06	1·42	1·81	2·88	1·55	1·89	2·32
Paralysis . . . . .	2·10	1·64	2·79	1·79	3·11	3·37	1·98	3·19	1·89
Convulsions . . . . .	1·74	1·85	1·75	2·01	2·38	0·77	0·84	1·29	1·31
BRONCHITIS . . . . .	14·10	16·44	13·23	12·02	11·73	8·85	9·59	12·66	9·01
Pneumonia . . . . .	3·97	4·77	3·60	2·92	2·95	3·15	3·12	3·44	1·60
Teething . . . . .	1·73	1·66	1·08	2·19	2·32	2·31	2·75	1·63	1·31



deaths by Cancer than other towns do. It would be interesting to inquire into the probable cause of this.

The Tubercular Class of Diseases caused 5117 deaths in the Eight Towns, and thus constituted 16·47 per cent. of the deaths, or caused 53 deaths in every ten thousand persons of the population. This, as compared with the deaths, is a lower proportion than usual; but as compared with the population, it is a higher proportion than usual. This fact shows that though the actual number of deaths from this class of diseases was higher than usual, yet the increase was not proportional to the increase of the deaths from all other causes. In other words, the above facts showed that the cause (whatever it was—call it atmospheric) which gave rise to the increased mortality in 1869, though it also increased the deaths from the tubercular affections, did not increase them to the same extent as it increased the deaths from other causes. This is, in fact, only giving an instance of what has been again and again observed with regard to the diseases classed under this head, that their mortality from year to year is more steady than that of most other diseases, and that they are less liable to those extreme fluctuations to which the zymotic diseases and the inflammatory affections of the respiratory organs are liable.

Of the diseases belonging to this class, Consumption or Phthisis was the most fatal, causing 3572 deaths in the Eight Towns, or 11·49 per cent. of the mortality. The proportion of deaths from Consumption in the several towns was very different. Thus, only 7·15 per cent. of the deaths were from Consumption in Leith, 8·86 per cent. of the deaths in Perth, 10·17 per cent. in Edinburgh, 11·37 in Paisley, 11·71 in Glasgow, 12·39 in Dundee, 13·49 in Greenock, and 13·94 in Aberdeen. The very circumstance of Aberdeen showing such a high proportion of deaths from Consumption, as compared with the total deaths, is a good example of the truth of the above remarks relative to the greater steadiness from year to year of the deaths from the tubercular diseases. In Aberdeen the general mortality was below the average of former years, and the deaths from Consumption in 1869 were also below the mean, but not so much as the other diseases. Therefore, though the actual deaths from Consumption were 17 fewer in number than during the previous year, the relative proportion of deaths from that disease was 13·94 per cent. of the deaths in 1869, but only 12·64 per cent. in 1868.

When the deaths from Consumption in the Eight Towns are compared with the population, Leith would appear to be the town least liable to that complaint, Greenock the most liable. Thus, for every ten thousand persons in each town, there died from Consumption during the year, 21 in Leith, 22 in Perth, 30 in Edinburgh, 32 in Aberdeen, 34 in Paisley, 40 in Glasgow, 43 in Dundee, and 48 in Greenock.

Of the other tubercular diseases, Hydrocephalus caused 944 deaths, Tabes Mesenterica 390, and Scrofula 211.

Diseases of the Brain and Nervous System caused 2450 deaths in the Eight Towns, and thus constituted 7·88 per cent. of the mortality, or caused 26 deaths during the year in every ten thousand persons. The mortality from the brain diseases was very different in the several towns. Thus they constituted 6·41 per cent. of the deaths in Greenock, 6·93 per cent. of the deaths in Glasgow, 6·96 per cent. in Dundee, 8·01 per cent. in Leith, 9·01 per cent. in Perth, 9·40 per cent. in Paisley, 10·12 per cent. in Edinburgh, and 10·88 per cent. of the deaths in Aberdeen. As compared with the population, for every ten thousand persons in each town, there died from



brain disease 22·0 in Perth, 22·8 in Greenock, 23·9 in Leith, 24·1 in Glasgow, 24·5 in Dundee, 25·7 in Aberdeen, 28·7 in Paisley, and 30·7 in Edinburgh.

Diseases of the Heart and Organs of the Circulation caused 1209 deaths, thus constituting 3·89 per cent. of the deaths, or 12·6 deaths in every ten thousand persons. The proportion of deaths from Heart Disease was highest in Edinburgh and Perth, lowest in Paisley and Glasgow. Thus, only 2·38 per cent. of the deaths were caused by Heart Disease in Paisley, 2·83 per cent. in Glasgow, 3·83 per cent. in Dundee, 4·05 per cent. in Leith, 4·92 per cent. in Greenock, 5·50 per cent. in Aberdeen, 6·16 per cent. in Edinburgh, and 6·39 per cent. in Perth. As compared with the population, the mortality from Heart Diseases was lowest in Paisley and highest in Edinburgh.

Inflammatory Affections of the Respiratory Organs caused 6198 deaths, being an increase of 1587 deaths, or 34·4 per cent., from this cause alone over those of the previous year. They thus constituted the very high proportion of 19·95 per cent. of the deaths, or caused 64·8 deaths in every ten thousand persons. The average town proportion is only 15·05 per cent. of the deaths, or 40·7 deaths in every ten thousand persons, so that it is at once apparent how very great has been the increase on this class of diseases during the past year. It is acknowledged by all that this class of diseases is almost entirely under the influence of atmospheric agencies. They regularly diminish in prevalence with the advance of mild weather, and as regularly increase with the decrease of temperature, or with the blowing of cold northerly or easterly winds. As nearly half of the increased mortality of the year was therefore caused by these diseases—that is, was caused by atmospheric influences—and as these same atmospheric agencies have again and again been proved to increase the mortality from all diseases, we have a perfectly satisfactory reason for the increased mortality which prevailed in our towns during 1869, without requiring to assume that their sanitary condition had suddenly deteriorated to the extent of 18·6 per cent.

The deaths from inflammatory affections of the respiratory organs was lowest in Perth, highest in Glasgow. Thus, for every ten thousand persons in each town, there occurred 29 deaths in Perth, 39 in Paisley and in Aberdeen, 52 in Greenock and in Leith, 58 in Edinburgh and in Dundee, and 79 in Glasgow. Or, if compared with the total deaths, 11·62 per cent. of the deaths were caused by that class of diseases in Perth, 12·91 per cent. in Paisley, 14·64 per cent. in Greenock, 16·72 per cent. in Aberdeen, 16·76 per cent. in Dundee, 17·57 per cent. in Leith, 19·37 per cent. in Edinburgh, and 23·01 per cent. in Glasgow. The mortality from that class of diseases was therefore excessive in Glasgow, and very high in Edinburgh, Dundee, Leith, and Greenock.

Of the various diseases belonging to this class, Bronchitis caused 4381 deaths in the Eight Towns, Pneumonia 1285, undefined Disease of Lungs 249, Asthma 197, Pleurisy 79, and Laryngitis 57.

Diseases of the Organs of Digestion caused 2003 deaths in the Eight Towns, thus constituting 6·44 per cent. of the mortality, or 20·8 deaths in every ten thousand of the population.

Of the other classes of disease, Diseases of the Urinary Organs caused 367 deaths; Childbirth and Diseases of the Generative Organs, 272 deaths; Rheumatism and Diseases of Joints and Bones, 162 deaths; Skin Diseases, 32 deaths; Malformations, 56 deaths; Debility and Premature Birth, 1428 deaths; Old Age, 1263 deaths; Sudden, 106 deaths.

Including the cases of Metria, or Childbed Fever, 265 mothers died in



giving birth to 39515 children, showing that one mother died for every 149 children born alive.

946 deaths were ascribed to violent causes in the Eight Towns, thus constituting 3·04 per cent. of the deaths, or 9·9 deaths in every ten thousand persons. It is a very remarkable fact, explain it how we will, that in general the deaths from accident rise and fall with the deaths from disease. Thus, during 1869, the increase on the total deaths over the previous year was 18·6 per cent.; and it cannot fail to strike every one with surprise, to find that the increase on the accidental or violent deaths was to the extent of 15·6 per cent.

In proportion to the population, Greenock and Leith, and then Glasgow, had the highest mortality from violent deaths; Paisley and Perth the lowest. 371 deaths resulted from fractures and contusions, 146 from drowning, 85 from burns and scalds, 63 from suffocation, 22 from hanging, 78 from want of breast milk, 54 from intemperance, 4 from privation of food, 3 from exposure to cold, 13 from poison, 5 from poisoned wounds, 7 from gunshot wounds, 15 from cuts and stabs, and 70 from other violent causes not included in the above.

Of the 946 violent deaths, 45 were suicides, and one a murder.

### MARRIAGES IN THE EIGHT TOWNS.

9161 Marriages were registered in the Eight Towns during 1869, being 555 more marriages than during the previous year, or an increase by 6·4 per cent. This indicates the high marriage-rate of 94 marriages in every ten thousand persons, that of the previous year being only 90 marriages in a like population.

The proportion of marriages in the several towns was lowest in Perth, and highest in Leith. Thus, for every ten thousand persons in each town, there occurred 80 marriages in Perth, 86 in Paisley, 90 in Dundee and Aberdeen, 93 in Glasgow, 98 in Edinburgh, 108 in Greenock, and 109 in Leith.

### WEATHER AND ITS INFLUENCE ON THE MORTALITY.

It may now be regarded as an established fact, that in Scotland the weather is the agent which exerts the most powerful influence on the mor-

TABLE XV.—Monthly Mortality in Scotland in 1869, compared with that of the Ten Years 1855-1864.

MONTHS.	1869.			1855-64.
	Absolute Deaths.	Deaths when Months equalized to 31 Days.	Proportion to 12,000 per annum or 1000 per month.	Proportion.
January . . . . .	6619	6619	1028	1134
February . . . . .	6172	6832	1061	1193
March . . . . .	7640	7640	1186	1145
April . . . . .	6650	6872	1067	1083
May . . . . .	6424	6424	998	1010
June . . . . .	6375	6587	1023	956
July . . . . .	5848	5848	908	895
August . . . . .	5410	5410	840	856
September . . . . .	5274	5450	846	843
October . . . . .	5430	5430	843	858
November . . . . .	6515	6732	1045	954
December . . . . .	7432	7432	1155	1073
YEAR . . . . .	75,789	77,276	12,000	12,000



tality. During few seasons does the temperature of the warmer months rise so high as to induce an increased mortality. Hence, in Scotland, the more genial months are those which are most healthy. In all countries, however, where the mean temperature of the summer or autumnal months rises above  $60^{\circ}$ , the greatest mortality occurs during these warm months; and hence it happens that, even in Scotland, when the temperature rises higher than usual, an increase in the deaths is observed, and that increase is caused by the same class of diseases (*viz.* bowel-complaints) which induce the high mortality during the hot months of warmer regions.

In Scotland it is the cold which is the chief agent in increasing and regulating the deaths; but the cold exerts its deleterious action under two forms—1st, through mere lowness of temperature; and, 2d, through the agency of cold northerly or easterly winds. As a general rule, the coldest months are also the most fatal; but if, with a low temperature, the keen, arid northerly or easterly winds blow with anything like severity, the mortality becomes as high as if a pestilence were raging.

The influence of these combined deleterious atmospheric agencies in increasing the mortality was strikingly illustrated during 1869, which showed itself, in more ways than one, to be a year characterized by its exceptional meteorological phenomena.

Thus, taking a ten years' average, January and February are the coldest months, averaging respectively  $37^{\circ}1$  and  $37^{\circ}4$  of mean temperature; after which follows December, with a mean temperature of  $38^{\circ}6$ , and March, with a mean temperature of  $39^{\circ}8$ . But the year 1869 was of such an exceptional and severe character, that the coldest month of the year was December, when the mean temperature was only  $34^{\circ}9$ ; while March was the second coldest month, its mean temperature being only  $37^{\circ}8$ , or  $4^{\circ}1$  below that of February—a strikingly unusual occurrence.

It has been long observed that, when the cold weather first sets in, it does not prove so fatal to the general population as it does later in the winter, the greater amount of vitality in the people somewhat resisting the depressing effect of the cold at the early part of the season; whereas, when severe cold occurs towards the end of winter, the constitutions of the people having been already weakened by its continuance, the deaths increase to a most alarming extent. This was strikingly illustrated during the past year. The coldest month was December, and it produced 7432 deaths. March, however, though nearly three degrees of temperature warmer, found the people weakened by the long continuance of the cold, and produced 7640 deaths. Had these two months been each of their average temperatures, the deaths during December would only have amounted to 5928, and the deaths in March to 6326. The extraordinary severity of the weather, therefore, during these two months alone caused an increase of 2820 deaths more than would have occurred had the weather maintained its usual character. Even if we compared the mortality of these months with that of the previous year, 1868, which was in many respects near a year of mean mortality, we shall find that the year 1869 yielded an excess of 2436 deaths for these two months.

January and February 1869 were unusually mild months, the prevalent winds being from the south-west and west, with less northerly or easterly winds than had occurred for years; and the consequence was, that there was no truly wintry weather during either of these months till the last week of February. The mean temperature of January was therefore  $40^{\circ}4$ , and that of February  $41^{\circ}9$ , and the deaths registered in Scotland were 6619 in January, and 6172 in February,—averaging 213 deaths daily during Janu-



ary, and 220 daily during February. This slight increase of the deaths during February from the mere continuance of the cold weather, even though its mean temperature may rise a degree or two above that of January, is observed year after year. (Table XVI.)

Very different kind of weather prevailed during March. On the 27th February the wind veered to the north and north-west, and the whole of Scotland was immediately covered with snow; the frost was often severe; and during the whole month of March the winds blew with biting severity from the north, occasionally varying slightly to the north-west and north-east. The pernicious effects of these cold withering winds was instantly marked on the health of the people. Every disease increased in virulence and fatality, especially those of the respiratory organs, and the various epidemics which prevailed in different parts of the country, so that the deaths in Scotland rose to 7640 during March, or to 246 deaths daily—the highest proportion attained during the year.

April, as to weather, was an average month, with a mean temperature of 46°·9, which is rather above the average of former years; but so many had been seriously affected by the cold weather of the previous month, and died during this one, that the deaths in April numbered 6650, or were at the rate of 222 deaths daily.

During both May and June the mean temperature was considerably below the mean, apparently produced by the unusual prevalence and severity

TABLE XVI.—Meteorology of Scotland for the Year 1869, deduced from observations made at 55 Stations of the Meteorological Society of Scotland, the particulars for each of the Stations having been published in the Quarterly Reports of the Registrar-General for 1869; also, the Number of Births, Deaths, and Marriages registered during each Month of the Year 1869.

1869.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	YEAR.
Highest Temp. in shade	57°·0	60°·5	63°·0	78°·3	72°·0	79°·5	85°·2	87°·5	74°·5	71°·5	64°·7	61°·0	87°·5
Lowest Temp. in do.	14°·0	24°·0	17°·0	18°·0	21°·0	29°·0	35°·0	25°·0	33°·0	22°·8	8°·0	3°·0	3°·0
Mean Day Temp. . . .	44°·5	46°·8	43°·9	54°·8	52°·5	61°·0	67°·2	64°·2	59°·6	52°·7	45°·5	39°·8	52°·7
Mean Night Temp. . .	36°·4	36°·9	31°·9	38°·9	37°·8	45°·2	51°·4	48°·0	47°·6	41°·6	35°·3	29°·9	40°·1
Daily Range . . . .	8°·1	9°·8	12°·0	15°·8	14°·7	15°·8	15°·8	16°·3	12°·0	11°·1	10°·3	9°·9	12°·6
Mean Temperature . .	40°·4	41°·9	37°·8	46°·9	45°·1	53°·1	59°·3	56°·1	53°·7	47°·3	40°·4	34°·9	46°·4
Highest Temperature in sun . . . . .	76°·8	91°·0	112°·9	131°·8	137°·0	140°·1	138°·0	136°·2	127°·9	115°·7	86°·2	81°·0	140°·1
Lowest on grass at night	8°·0	12°·4	12°·0	11°·0	12°·0	21°·0	25°·5	16°·9	5°·0	15°·0	7°·0	-5°·0	-5°·0
Wet-bulb Temperature	39°·2	39°·6	35°·2	43°·8	42°·1	50°·0	55°·8	52°·7	51°·2	44°·9	38°·1	33°·5	43°·8
Dew-point Temperature	37°·6	37°·7	32°·6	40°·9	38°·5	46°·9	53°·1	50°·0	49°·1	43°·0	36°·0	31°·5	41°·4
Humidity of Air . . .	90	88	84	82	78	80	82	82	86	88	87	88	85
Elastic force of Vapour (inches) . . . . .	·226	·229	·186	·257	·234	·322	·405	·362	·349	·280	·212	·179	·270
Number of Rainy Days	18	19	12	11	11	9	12	10	20	15	18	15	170
Amount of Rain (inch.)	4·85	4·05	1·33	1·99	1·37	2·15	1·62	1·32	5·92	3·00	4·28	4·66	36·54
Amount of Cloud . . .	7·5	6·7	5·7	5·8	6·6	6·6	6·5	5·9	6·9	6·7	6·2	6·1	6·4
Hours of Sunshine . .	49	84	157	202	176	214	217	206	118	102	79	72	1676
Mean Barometer (in.)	29·766	29·677	29·890	29·992	29·899	30·039	29·962	30·015	29·590	29·969	29·730	29·693	29·852
Easterly Winds (num- ber of days) . . . .	5	3	10	8	18	6	5	4	4	6	1	7	77
Westerly Winds (do.)	13	18	10	13	7	16	18	19	17	14	21	13	179
Births . . . . .	9537	8709	10183	9987	9804	9681	9809	9092	8745	9346	9180	9322	113395
Deaths . . . . .	6619	6172	7640	6650	6424	6375	5848	5410	5274	5430	6515	7432	75788
Marriages . . . . .	2670	1345	1276	1251	1099	3246	2182	1429	1259	1473	2274	2579	22088
Daily Births . . . . .	308	311	329	333	316	323	316	293	291	301	306	301	311
Daily Deaths . . . .	213	220	246	222	207	212	189	174	176	175	217	240	208
Daily Marriages* . . .	127	67	54	57	52	147	99	65	57	70	103	112	85

\* As few or no Marriages are contracted in Scotland on Saturday or Sunday, these days are excluded from each month in calculating the daily number of Marriages.



of the northerly winds, which not only blew with a constancy rarely witnessed in Scotland, but with such keenness that, on the 15th, 16th, and 17th of June, the whole of the high ranges of hills in Scotland were covered with snow. The consequence was that, instead of June being one of the months whose mortality was below the mean, it had, with May, a high mortality—nay, a higher mortality than May itself; for May had 207 deaths daily, while June had 212 daily. In fact, these two months had an excess of 1625 deaths above those of the corresponding months of the previous year, and the different state of the weather during the corresponding months of the two years sufficiently accounted for the difference.

July was the warmest month of the year, its mean temperature reaching  $59^{\circ}3$ . It was also a month of great drought, and it has been invariably remarked that such kind of weather is attended with much sickness. Accordingly, 5848 deaths were registered during the month, being at the rate of 189 deaths daily.

August was also characterized by its extreme drought, and its mean temperature was below the average, being only  $56^{\circ}1$ . The alternations of temperature were also often great. The mortality was therefore at the rate of 174 deaths daily.

As a general rule, September is the month of least mortality in Scotland, after which comes August, and then October. But during 1869 all this was reversed. August proved to be the month of least mortality, after which came October, while September was the third. This fact, of itself, proved what an exceptional year 1869 was.

The mean temperature during September was  $51^{\circ}2$ , which was below the average of previous years; but the drought which had lasted for two months came to a sudden termination, and September proved a very rainy month, scarcely a day passing without a shower, and the quantity of water which fell was a half more than the average of former years. Under this great change of weather the health of the people did not improve, so that the daily deaths numbered 176, or two more daily than during the previous month.

During October the mean temperature was the average of former years, being  $47^{\circ}3$ ; but there was an unusual amount of north and north-west winds, and snow covered the hills from the 14th of the month. The deaths, therefore, still remained high, though not quite so much so as during September, seeing that 175 persons died daily over Scotland.

During November the weather was very much as usual, with a mean temperature of  $40^{\circ}4$ ; and the deaths, as usual, increased with the fall of temperature, so that 217 deaths occurred daily.

During December the weather proved much colder than usual, its mean temperature being  $3^{\circ}7$  below the average of former years. Dry frost prevailed during most of the month, accompanied by cutting northerly, north-easterly, and north-westerly winds; and under this ungenial weather sickness prevailed to an extent seldom witnessed in Scotland, affections of the respiratory organs being nearly universal. The deaths consequently rose to 7432 during the month, being at the high rate of 240 deaths daily.

These striking facts prove how closely our health and lives are dependent on the kind of weather which prevails. In interpreting these meteorological conditions, and showing how they act deleteriously on the human race, it must be remembered that their influence for evil depends on the state of health of the community whose case we may be considering. The lower the state of health, the more powerfully do these adverse meteorological



logical agencies act on the person. This is the reason why these agencies exert so much more deadly an influence over the population of our overcrowded towns, than over those in our small towns and in the rural districts. Just in proportion to the overcrowding and the breathing of vitiated air, is the general health of the people deteriorated; so that when any cause comes which induces or increases disease, the inhabitants of the overcrowded town fall a prey to disease to a much greater extent than they do in towns where the population is more widely spread, and where the air breathed is consequently purer.

Our Monthly Reports of the diseases causing deaths in the Eight Towns of Scotland, enable us to trace the influence of weather on each of the diseases which afflict our race. On no class of diseases was this influence seen more strikingly during the last year than on the inflammatory affections of the respiratory organs. Thus, during September, only 229 died from these diseases; but as the temperature fell, and the northerly winds got more keen, the deaths from these diseases increased to 287 in October, to 567 in November, and to 903 in December. Brain diseases only proved fatal to 150 persons in September, but to 260 in December. Heart diseases only cut off 72 persons in October, but 126 in November, and 111 in December. It is a recognised fact that Consumption is always most fatal when the northerly or easterly winds blow with severity in spring; but in 1869 the fatality was much greater than usual in March and May, under the exceptional keenness of the north winds; for while only 225 died from Consumption in October, and 300 in January, no fewer than 408 were cut off in March, and 391 in May. Fever, which caused only 115 deaths in January, caused 189 in March; and though only 118 died from that disease in September, 193 deaths were caused by it in December. Scarlatina caused 114 deaths in July, but 333 in November. Hooping-cough, which caused 61 deaths in September, caused 145 in December. (Table XVII.)

The most instructive Table, however, as to the influence of the weather,

TABLE XVII.—Showing the connection between Atmospheric Phenomena, especially Mean Temperature, and the Deaths from certain Diseases and Classes of Disease, in the Eight Principal Towns of Scotland, during each Month of the Year 1869.

1869.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Mean Temperature . .	40°·9	42°·8	38°·5	47°·5	45°·8	54°·4	60°·0	56°·9	54°·6	48°·2	40°·8	35°·8
Highest Temperature . .	53°·0	58°·0	63°·0	72°·2	68°·7	79°·0	81°·0	81°·5	71°·6	69°·6	59°·1	55°·7
Lowest Temperature . .	15°·0	28°·0	23°·0	26°·0	28°·7	34°·0	41°·0	30°·5	38°·0	28°·5	20°·7	13°·0
Rainfall in inches . .	5·20	4·68	1·17	1·86	1·05	2·41	1·67	0·92	6·54	3·07	2·95	5·47
Easterly Winds (days) . .	6	2	10	9	20	9	5	5	5	6	0	7
Westerly Winds (days) . .	15	19	11	15	8	14	18	20	17	18	25	16
Total Deaths . . . .	2749	2506	3218	2728	2662	2686	2424	2244	2095	2188	2788	3162
Daily Deaths . . . .	89	89	104	91	86	89	78	72	70	70	93	102
Zymotic Diseases . . . .	624	547	688	631	653	746	676	680	694	727	840	772
Small-pox . . . . .	2	3	6	6	6	2	4	4	3	3	3	9
Measles . . . . .	60	84	97	103	138	128	111	58	43	29	31	19
Scarlatina . . . . .	199	113	100	107	108	137	114	157	277	334	333	271
Diphtheria . . . . .	19	16	15	21	13	18	9	9	12	18	17	16
Hooping-Cough . . . .	115	95	141	107	122	159	118	99	61	75	122	145
Croup . . . . .	43	41	32	36	29	19	20	20	26	32	43	43
All Fevers . . . . .	115	120	189	180	164	185	153	159	118	128	178	193
Diarrhœa . . . . .	25	32	42	32	36	53	105	137	105	59	52	35
Dysentery . . . . .	7	5	7	4	3	7	4	3	13	4	7	0
Cholera . . . . .	0	3	1	0	2	5	12	7	9	9	2	1
Consumption . . . . .	300	245	408	303	391	329	311	268	257	220	251	289
Diseases Respiratory Organs	607	587	812	613	535	486	339	233	229	287	567	903
Heart, etc., Diseases . .	102	129	124	105	80	99	101	77	83	72	126	111
Brain, etc., Diseases . .	216	212	230	208	210	213	208	174	150	174	195	260
Debility and Premat. Birth	126	124	145	122	119	124	128	110	106	100	97	128
Age . . . . .	135	99	145	117	96	115	87	75	81	69	105	139



but especially of mean temperature, on the mortality, is that which shows the weekly deaths, alongside of the highest, lowest, and mean temperatures, and the rainfall during each week of the year 1869. (Table XVIII.) In reading that Table, however, it is necessary to remember, that if the extreme cold occurred at the end of a week, the deaths caused by that cold will be found in next week's register; whereas, when the extreme cold occurred at the beginning of the week, the registrations during that week express very accurately the influence of that depression of temperature on the deaths. One or two examples may be quoted. During the weeks ending 13th and 20th February, the mean temperature was  $43^{\circ}2$ , and the weekly deaths numbered respectively 611 and 595; but the mean temperature fell to  $36^{\circ}4$  and  $38^{\circ}4$  on the weeks ending 13th and 20th March, and the deaths rose to 700 and 747 weekly; and even when the temperature rose to  $40^{\circ}$  and to  $41^{\circ}$  during the two following weeks, being still a lower temperature than during February, the deaths continued at the high rate of 727 and 716 weekly. During the week ending November 6th, with the mean temperature of  $45^{\circ}3$ , there were registered 586 deaths; but during the week ending 4th December, the mean temperature was  $31^{\circ}3$  only, and the deaths registered numbered 642; but as the greatest cold occurred on the Thursday night, it was not till the following week that the full effect of the reduction of temperature was seen upon the deaths, when, though the temperature was higher, viz.  $36^{\circ}9$ , there were registered 753 deaths, and 751 on the week following.

It is a very interesting and important inquiry, to trace the influence of season and atmospheric vicissitudes on the mortality at different ages. From the want of facts, the most vague theories prevail, and it is with the view of furnishing facts on this subject that Tables XIX. to XXII. have been

TABLE XVIII.—Deaths, Temperatures, and Fall of Rain, in the Eight Principal Towns of Scotland during each Week of the Year 1869.

No. of Week.	Week ending	DEATHS.	TEMPERATURE.			RAIN, in inches	No. of Week.	Week ending	DEATHS.	TEMPERATURE.			RAIN, in inches
			Mean.	Highest	Lowest.					Mean.	Highest	Lowest.	
			°	°	°					°	°	°	
1	January 2	619	35.1	45.1	15.0	1.019	27	July 3	545	59.1	74.8	42.1	0.018
2	9	688	42.8	54.0	31.0	1.007	28	10	546	59.7	71.7	45.0	0.473
3	16	577	42.0	51.0	33.0	0.524	29	17	519	61.3	83.0	47.3	0.029
4	23	651	40.9	50.2	29.0	1.556	30	24	589	62.0	82.0	42.0	0.319
5	30	666	39.2	52.1	25.0	1.209	31	31	529	58.5	75.0	41.0	0.626
6	February 6	628	44.4	58.0	28.0	0.710	32	August 7	512	54.8	69.0	41.0	0.663
7	13	611	43.2	53.7	31.0	1.719	33	14	492	55.4	69.5	38.0	0.530
8	20	595	43.3	58.0	30.6	1.039	34	21	466	58.2	78.0	37.7	0.017
9	27	672	41.8	57.5	31.6	1.223	35	28	560	62.4	84.0	47.0	0.004
10	March 6	623	35.4	48.2	23.0	0.772	36	September 4	482	52.7	69.0	30.5	0.018
11	13	700	36.4	47.0	26.0	0.382	37	11	515	58.4	71.6	45.0	1.008
12	20	747	38.4	51.6	27.0	0.177	38	18	517	52.9	67.0	33.0	2.536
13	27	727	41.1	63.0	28.0	0.147	39	25	419	53.8	67.1	41.1	1.426
14	April 3	716	40.0	52.0	25.0	0.323	40	October 2	495	53.4	67.1	38.2	1.917
15	10	627	43.5	63.2	26.0	0.482	41	9	500	54.7	68.0	40.0	0.141
16	17	694	52.3	71.5	38.3	0.621	42	16	468	51.0	68.3	36.5	1.008
17	24	599	48.4	67.5	31.9	0.374	43	23	577	43.6	61.9	29.8	0.769
18	May 1	574	50.1	72.2	32.2	0.017	44	30	525	40.6	57.5	26.0	0.395
19	8	609	43.2	58.0	28.7	0.687	45	November 6	586	45.3	59.0	31.0	0.891
20	15	619	45.5	62.0	28.0	0.134	46	13	621	39.6	54.3	23.4	1.020
21	22	605	47.4	60.8	35.0	0.211	47	20	675	47.1	58.4	32.6	0.716
22	29	593	46.0	61.0	30.0	0.083	48	27	613	38.0	57.0	23.7	0.552
23	June 5	687	50.5	69.2	34.5	0.462	49	December 4	642	31.3	42.0	17.7	0.119
24	12	641	54.3	70.6	34.0	0.218	50	11	753	36.9	50.0	20.5	0.875
25	19	618	50.1	69.0	34.0	1.482	51	18	751	39.5	55.7	28.8	1.758
26	26	626	58.9	77.0	39.0	0.004	52	25	667	36.1	56.0	22.5	0.459
							53	January 1	659	34.3	48.0	13.0	1.403



drawn up. These Tables must be read horizontally, or perpendicularly, according to the kind of information we wish to obtain from them; and the facts are confined to the Eight Principal Towns.

Let us first look at the influence of season on the deaths at each of the four periods of life noted in the Tables. For this purpose we must read the columns perpendicularly, and confine our attention to the corrected deaths given in Table XX.; but it must be remembered that the conclusions deducible therefrom are alone applicable to the year 1869, as they differ considerably from those deduced from a ten years' summary of the same class of facts.

For children under 5 years it will be seen that the lowest mortality occurred in the month of September, 946 deaths having only occurred among such during that month. The next most healthy months were August and October, when 1005 deaths respectively occurred. July was the next most healthy month, 1132 deaths only having occurred; and it was with extreme surprise that it was found that January was the fifth most healthy month for children under 5 years of age, 1183 deaths having occurred.

The most fatal month for children under 5 years during 1869 was March, when 1455 deaths occurred. Then followed December, with 1367

TABLE XIX.—Monthly Mortality at Four Periods of Life in the Eight Principal Towns of Scotland during 1869, and Proportion at each Age in every hundred Deaths per Month.

MONTHS.	Absolute Number of Deaths, 1869.					Proportion at each Age in every Hundred Deaths per Month.				
	Under 5 years.	5-20.	20-60.	60 and above.	Total Deaths.	Under 5 years.	5-20.	20-60.	60 and above.	Total.
January . . .	1183	291	771	504	2749	43·03	10·59	28·05	18·33	100·00
February . . .	1148	193	733	432	2506	45·81	7·70	29·25	17·24	100·00
March . . .	1455	312	908	543	3218	45·21	9·70	28·22	16·87	100·00
April . . .	1222	280	777	449	2728	44·79	10·27	28·48	16·46	100·00
May . . .	1224	283	784	371	2662	45·98	10·63	29·45	13·94	100·00
June . . .	1177	325	754	430	2686	43·82	12·10	28·07	16·01	100·00
July . . .	1132	278	686	328	2424	46·70	11·47	28·30	13·53	100·00
August . . .	1005	258	667	314	2244	44·79	11·49	29·72	14·00	100·00
September . . .	916	296	584	299	2095	43·72	14·13	27·88	14·27	100·00
October . . .	1005	291	579	313	2188	45·93	13·30	26·46	14·31	100·00
November . . .	1237	306	797	448	2788	44·37	10·98	28·58	16·07	100·00
December . . .	1367	312	900	583	3162	43·23	9·87	28·46	18·44	100·00
YEAR . . .	14,071	3425	8940	5014	31,450	44·74	10·89	28·43	15·94	100·00

TABLE XX.—Months equalized to 31 days, and Deaths at each age corrected thereto, in order to show the relative Mortality at each Age during every Month of the Year 1869.

MONTHS.	Relative Number of Deaths, 1869.					Monthly Deaths, proportioned to 1000 per Month or 12,000 per Annum.
	Under 5 years.	5-20.	20-60.	60 and above.	Total Deaths.	
January . . . . .	1183	291	771	504	2749	1029
February . . . . .	1271	213	811	477	2772	1038
March . . . . .	1455	312	908	543	3218	1205
April . . . . .	1263	289	803	464	2819	1055
May . . . . .	1224	283	784	371	2662	997
June . . . . .	1216	336	779	444	2775	1039
July . . . . .	1132	278	686	328	2424	907
August . . . . .	1005	258	667	314	2244	840
September . . . . .	946	305	604	309	2164	810
October . . . . .	1005	291	579	313	2188	819
November . . . . .	1278	316	824	463	2881	1077
December . . . . .	1367	312	900	583	3162	1184
YEAR . . . . .	14,345	3484	9116	5113	32,058	12,000



deaths; November, with 1278 deaths; February, with 1271 deaths; April, with 1263 deaths; May, with 1224 deaths; and June, with 1216 deaths.

1869, however, was an exceptional year, and the proportional average fatality of each month to children under 5 years of age can only be obtained by taking the average of a number of years. Tables XXI. and XXII. give the facts for the ten years 1856-1865.

The first column of Table XXII. shows that during these ten years the month of least mortality to children under 5 years of age was September, when 8649 deaths occurred. Then followed June, with its 8675 deaths; August, with its 8889 deaths; July, with its 9052 deaths; May, with its 9058 deaths; October, with its 9078 deaths; and April, with its 9929 deaths.

During these ten years the month most fatal to children under 5 years of age was February, when 11165 deaths occurred. Then followed January, with 11066 deaths; December, with 10590 deaths; November, with 10458 deaths; and March, with 10359 deaths.

These facts show how very exceptional the weather and the mortality were in 1869. For while during a ten yearly period February was the most fatal month to children under 5, and March was only the fifth fatal month; during 1869 March was the most fatal month, while February only came fourth.

TABLE XXI.—Monthly Mortality at Four Periods of Life in the Eight Principal Towns of Scotland during the Ten Years 1856-1865, and the Proportion at each age in every hundred Deaths per Month.

MONTHS.	Absolute Number of Deaths, Ten Years 1856-1865.					Proportion at each Age in every Hundred Deaths per Month.				
	Under 5 years.	5-20.	20-60.	60 and above.	Total Deaths.	Under 5 years.	5-20.	20-60.	60 and above.	Total.
January . . .	11066	2305	7003	4337	24711	44.78	9.33	28.34	17.55	100.00
February . . .	10190	2145	6235	3802	22372	45.54	9.59	27.87	17.00	100.00
March . . .	10359	2271	6809	3865	23304	44.45	9.75	29.22	16.58	100.00
April . . .	9609	2131	6095	3625	21460	44.77	9.94	28.40	16.89	100.00
May . . .	9058	2214	5899	3180	20351	44.51	10.88	28.98	15.63	100.00
June . . .	9395	2086	5559	3111	19151	43.84	10.89	29.03	16.24	100.00
July . . .	9052	2121	5287	2886	19346	46.79	10.96	27.33	14.92	100.00
August . . .	8889	1929	4983	2698	18504	48.05	10.42	26.95	14.58	100.00
September . . .	8370	1870	4572	2454	17266	48.48	10.83	26.48	14.21	100.00
October . . .	9078	2120	4936	2679	18813	48.25	11.26	26.24	14.25	100.00
November . . .	10121	2148	5690	3549	21508	47.05	9.99	26.45	16.51	100.00
December . . .	10590	2258	6344	3893	23085	45.87	9.78	27.49	16.86	100.00
TEN YEARS .	114,777	25,598	69,417	40,079	249,871	45.93	10.25	27.78	16.04	100.00

TABLE XXII.—Months equalized to 31 days, and Deaths at each Age corrected thereto, in order to show the relative Mortality at each Age during every Month of the Ten Years 1856-1865.

MONTHS.	Relative Number of Deaths, Ten Years 1856-1865.					Monthly Deaths, proportioned to 1000 per Month or 12,000 per Annum.
	Under 5 years.	5-20.	20-60.	60 and above.	Total.	
January . . .	11066	2305	7033	4337	24711	1164
February . . .	11165	2348	6833	4165	24511	1155
March . . .	10359	2271	6809	3865	23304	1098
April . . .	9929	2202	6298	3746	22175	1045
May . . .	9058	2214	5899	3180	20351	959
June . . .	8675	2155	5744	3215	19789	933
July . . .	9052	2121	5287	2886	19346	912
August . . .	8899	1929	4988	2698	18504	872
September . . .	8649	1932	4724	2536	17841	841
October . . .	9078	2120	4936	2679	18813	886
November . . .	10458	2220	5879	3668	22225	1047
December . . .	10590	2258	6344	3893	23085	1088
TEN YEARS .	116,968	26,075	70,744	40,868	254,645	12,000



It is a remarkable fact, that in ordinary seasons there is less variation in the monthly mortality of persons between the ages of 5 and 20 years than at any other period of life. Thus, by the ten-yearly Table, second column, it will be seen that, though the months of least mortality were in order, August, September, October, July, and June, and the most fatal months in order, February, January, March, December, May, and April, the difference was not nearly so great as at the earlier years of life.

During 1869, however, the normal rule was departed from, and two of the months generally least fatal to persons between 5 and 20 years of age became fatal months. Thus, during 1869, the most fatal months to persons from 5 to 20 years of age were in order—June, 336 deaths; November, 316 deaths; March and December, each with 312 deaths; and September, with 305 deaths. The least fatal months to persons at these ages were February, with 213 deaths; August, with 258 deaths; July, 278 deaths; May, with 283 deaths; April, with 289 deaths; January and October, each with 291 deaths.

Thus, again, the exceptional character of the year 1869 was manifested; for while on the average of years June has six months more fatal than itself to persons between 5 and 20 years of age, in 1869 it was the most fatal month of the whole year.

On a ten years' average to persons between the ages of 20 and 60 years—the vigorous period of life—September was the month of least fatality; after which came in order, October, August, July, June, and November. And while January proved the most fatal month, there followed in order, February, March, December, May, and April.

During 1869, however, October proved the month of least fatality to persons from 20 to 60 years of age; after which followed in order, September, August, July, January, and June. The most fatal month to persons at that age was March; after which followed in order, December, November, February, April, and May.

The exceptional character of the year 1869 was therefore also strongly shown at this period of life, inasmuch as March, which in general is the third of the most fatal months to persons between 20 and 60 years of age, proved the most fatal in 1869, while December, which is usually the fourth most fatal month, became the second.

The hurtful effects of cold on persons above 60 years of age is strikingly exemplified in the fourth column of Table XXII. Thus, in a ten years' period, the most fatal month was January, with its 4837 deaths; and then February, with 4165 deaths; December, with 3893 deaths; March, with 3865 deaths; April, with 3746 deaths; and November, with 3668 deaths. The least fatal months to persons at this advanced age were September, with only 2536 deaths; October, 2679 deaths; August, 2698 deaths; July, 2886 deaths; May, 3180 deaths; and June, 3215 deaths.

During 1869, however, an exceptional mortality occurred. The most fatal month to persons above 60 years of age was December, when 583 deaths occurred; then followed in order, March, 543 deaths; January 504 deaths; February, 477 deaths; April, 464 deaths; and November, 463 deaths. The least fatal months to persons at the advanced ages during 1869, were in order, September, 309 deaths; October, 313 deaths; August, 314 deaths; July, 328 deaths; May, 371 deaths; and June, 444 deaths.

We thus again see the exceptional nature of the mortality during 1869, and its dependence on the kind of weather which prevailed; for while, in ordinary years, to persons above 60 years of age, three months precede March in fatality, only one month had a higher mortality during 1869.



When these Tables are read horizontally, they show the relative effect which season has on the mortality at each several age. It will be seen that the effect of season on the mortality at each period of life, in so far as regards the proportions in which the population is cut off at each age, does not differ so much as might have been expected,—that, in fact, increase of heat or of cold, however potent in increasing or diminishing the mortality, does not greatly alter the proportion which the deaths at the different ages hold to each other. In pointing out the influence of season on the mortality at each age, it was shown that that influence was less powerfully shown between the ages of 5 and 20 years than at any other. In other words, that the mortality at that period of life was less affected by the monthly vicissitudes than that at all other periods of life. Hence, when we compare the proportions dying at each age during each month, we find that during the healthiest months, when the mortality at every age is lowest, the relative proportion of those who died between the ages of 5 and 20 years seems to be at its highest. This is exactly what it ought to be. As the deaths at that age vary less during each month than do the other deaths, their relative proportion seems somewhat higher during the healthier months.

Taking the whole ten years, however, these Tables show, that of every hundred persons who died in the Principal Towns during that period, 45·93 were under 5 years of age, 10·25 were between 5 and 20 years, 27·78 were between 20 and 60 years, while 16·04 were above 60 years of age.

### VACCINATION IN SCOTLAND, 1868.

This is the Fifth Report relative to the vaccination of children in Scotland, and it shows what proportion of the children whose births were registered during the year 1868 were vaccinated according to the provisions of the Scottish Vaccination Act, 26 and 27 Vict. c. 108. By the provisions of that Act, a large proportion of the children born during 1868 must be vaccinated during the year 1869. The Report, therefore, having reference to vaccination, must always be one year behind that having reference to the births, deaths, and marriages.

From the vaccination returns just received, it appears that, of the 115621 children whose births were entered on the registers during the year 1868, 102140, being 88·340 per cent., were successfully vaccinated; 914, or 0·791 per cent., had their vaccination postponed from bad health or other

TABLE XXIII.—Deaths from Small-pox in Scotland, 1855–1869 inclusive.

YEARS.	Small-pox Deaths.	YEARS.	Small-pox Deaths.
1855	1309	1863	1646
1856	1306	1864	1741
1857	845	1865	383
1858	332	1866	200
1859	682	1867	100
1860	1495	1868	25*
1861	766	1869	100*
1862	426		

\* Estimated from the ascertained Small-pox Deaths in the Eight Principal Towns of Scotland, as compared with the total Small-pox Deaths in all Scotland during the Ten Years 1855–1864.



causes ; 514, being 0·444 per cent., were found to be insusceptible of vaccination—277 from constitutional insusceptibility, 7 from having had Small-pox, and 230 from having been previously vaccinated ; 9440, being 8·165 per cent., died before they could be vaccinated ; while 2613, being 2·260 per cent., had removed from the district before vaccination could be enforced, or were otherwise unaccounted for. (Table XXIV.)

The fact, however, which we wish to learn is, what proportion of the children who survived the age when they could be vaccinated are protected from the ravages of Small-pox by vaccination. Table XXV. is drawn up with the view of showing this fact, both for the year 1868 and also for the previous years during which the Vaccination Act has been in operation.

By that Table we learn that, of the surviving children of 1868, no fewer than 96·194 per cent. were successfully vaccinated ; that 0·861 per cent. had their vaccination postponed from bad health or other causes ; that 0·484 per cent. were insusceptible of vaccination ; while 2·461 per cent. had removed from the district before vaccination could be enforced, or were otherwise unaccounted for. It is this latter class who are alone dangerous to the community, as, from not being protected by vaccination, they are liable to Small-pox, while the migratory habits of their parents make them

TABLE XXIV.—VACCINATIONS in SCOTLAND, 1864–1868. Number of Births each Year, and Proportions Vaccinated, Dead before Vaccination, &c.

Years.		Success-fully Vaccinated.	Vaccina-tion Post-poned.	Insusceptible of Vaccination.			Died before Vaccina-tion.	Removed from District before Vaccination, or otherwise not accounted for.	TOTAL BIRTHS.*
				From Constitu-tional Insuscep-tibility.	From having had Small-pox.	From hav-ing been previously Vacci-nated.			
1864	Number .	95047	662	667	154	440	9180	2701	108851
1865	Number .	99648	719	474	34	207	9366	2681	113129
1866	Number .	100408	579	332	30	227	9433	2721	113730
1867	Number .	101139	670	233	16	151	9355	2617	114181
1868	Number .	102140	914	277	7	230	9440	2613	115621
1864	Per-centage	87·315	0·608	0·613	0·142	0·404	8·434	2·481	100·000
1865	Per-centage	88·084	0·636	0·419	0·030	0·183	8·279	2·369	100·000
1866	Per-centage	88·286	0·510	0·292	0·026	0·200	8·294	2·392	100·000
1867	Per-centage	88·578	0·587	0·204	0·014	0·132	8·193	2·292	100·000
1868	Per-centage	88·340	0·791	0·240	0·005	0·199	8·165	2·260	100·000

\* The slight discrepancy between the number of Births as here given and those published in the Annual Reports of the Registrar-General, arises from the circumstance that some of the Registrars have included the transcript Births, and this unduly increases the proportion of those who appear to escape vaccination.

TABLE XXV.—VACCINATIONS in SCOTLAND, 1864–1868. Particulars relating to the Vaccination of Children whose Births were Registered during each of the Years 1864–1868, deducting those who died before they could be vaccinated.

Years.		Successfully Vaccinated.	Vaccina-tion Postponed.	Insusceptible of Vaccination.			Removed from District before Vaccina-tion, or otherwise not accounted for.	TOTAL LIVING.
				From Constitu-tional Insuscep-tibility.	From having had Small-pox.	From having been previously Vaccinated.		
1864	Number .	95047	662	667	154	440	2701	99671
1865	Number .	99648	719	474	34	207	2681	103763
1866	Number .	100408	579	332	30	227	2721	104297
1867	Number .	101139	670	233	16	151	2617	104826
1868	Number .	102140	914	277	7	230	2613	106181
1864	Per-centage	95·361	0·664	0·669	0·155	0·441	2·710	100·000
1865	Per-centage	96·034	0·693	0·457	0·033	0·199	2·584	100·000
1866	Per-centage	96·271	0·555	0·318	0·029	0·217	2·610	100·000
1867	Per-centage	96·483	0·639	0·222	0·015	0·144	2·497	100·000
1868	Per-centage	96·194	0·861	0·261	0·007	0·216	2·461	100·000



more dangerous to the community than any other class, seeing they are the fruitful means of introducing Small-pox into the otherwise healthy towns or districts which they frequent.

Small-pox, like every epidemic disease, has its periods of prevalence and of decline; and hitherto we have refrained from attributing the noted decline of Small-pox in Scotland to the successful working of the Vaccination Act, lest, after all, it should prove that the decline arose alone from the past years being those when Small-pox would of itself have been in abeyance. As Table XXIII. will show, during the first year when the Vaccination Act came into operation Small-pox was epidemic in Scotland, and caused the large number of 1741 deaths. At no former period of which we have any certain records, has an epidemic of Small-pox been longer absent from the people than three years; but since 1864 the number of cases of Small-pox has been gradually becoming fewer and fewer, so that in 1868 only 25 deaths occurred, and during the present year they cannot have exceeded 100 over all Scotland—a very large proportion of these having occurred in Greenock among those unprotected by vaccination.

Seeing, therefore, that for a period of five years Scotland has had no epidemic of Small-pox, and at no former period of which we have certain records has the mortality from Small-pox been so low, it seems only reasonable to infer that it is the successful working of the Vaccination Act which has produced this desirable result.

Many of the Registrars have appended notes to their returns relative to the working of the Vaccination Act, and extracts from several of these are given in the Appendix. These notes, while they agree with those given in former Reports in showing that the Act in general works successfully, also seem to demonstrate that some amendments are required to make it work more smoothly and more effectually over the country, and also for the purpose of removing certain decided hardships and the great risk to life to which the inhabitants of the Insular Districts are exposed when they endeavour to comply with the requirements of the present Act. As these suggested amendments have been commented on at length in former Reports, we simply make reference to them here lest their existence should be overlooked.

I have the honour to be,

SIR,

Your most obedient Servant,

JAMES STARK.







## BIRTHS

REGISTERED IN SCOTLAND DURING EACH MONTH OF THE YEAR 1869.

		POPULATION.	BIRTHS.																	
		1861	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total Births.	Males	Fem.	Total Illegit Births		
SCOTLAND, . . .		3,062,294	9537	8709	10183	9987	9804	9681	9809	9092	8745	9346	9180	9322	113395	58396	54999	11023		
DIVISIONS.																				
1	NORTHERN, . . .	130,422	230	223	211	239	263	258	303	248	270	311	275	303	3134	1656	1478	230		
2	NORTH-WESTERN, . . .	167,329	367	345	344	342	298	347	388	352	341	360	379	359	4222	2205	2017	271		
3	NORTH-EASTERN, . . .	366,783	1093	998	1031	1135	1074	1076	1112	1146	1028	1010	1045	1063	12811	6653	6158	1876		
4	EAST-MIDLAND, . . .	523,822	1529	1409	1682	1591	1483	1488	1588	1428	1461	1572	1449	1490	18170	9449	8721	1811		
5	WEST-MIDLAND, . . .	242,507	682	589	739	689	794	647	724	640	571	674	678	651	8078	4131	3947	635		
6	SOUTH-WESTERN, . . .	1,008,253	3781	3456	4146	4081	3913	3870	3763	3521	3316	3595	3512	3611	44565	22806	21759	3725		
7	SOUTH-EASTERN, . . .	408,962	1320	1197	1496	1379	1383	1416	1349	1264	1225	1309	1330	1354	16022	8233	7789	1486		
8	SOUTHERN, . . .	214,216	535	492	534	531	596	579	582	493	533	515	512	491	6393	3263	3130	989		
I. NORTHERN.																				
1	Shetland, . . . . .	31,670	39	46	37	46	52	63	66	82	70	87	91	73	752	382	370	31		
2	Orkney, . . . . .	32,395	61	50	51	52	64	75	67	66	62	71	63	91	773	431	342	48		
3	Caithness, . . . . .	42,200	97	88	88	98	104	82	133	68	92	97	92	92	1131	612	519	117		
4	Sutherland, . . . . .	24,157	33	39	35	43	43	38	37	32	46	56	29	47	478	231	247	34		
II. NORTH-WESTERN.																				
5	Ross and Cromarty, . . .	82,427	168	177	189	166	140	159	191	201	178	158	198	190	2115	1112	1003	85		
6	Inverness, . . . . .	84,902	199	168	155	176	158	188	197	151	163	202	181	169	2107	1093	1014	186		
III. NORTH-EASTERN.																				
7	Nairn, . . . . .	8,347	17	11	24	18	19	22	25	28	26	16	21	17	244	130	114	29		
8	Elgin (or Moray), . . .	44,218	113	116	108	120	115	105	105	95	106	103	109	95	1290	658	632	204		
9	Banff, . . . . .	56,020	164	144	138	189	151	165	176	148	147	135	144	140	1841	943	898	300		
10	Aberdeen, . . . . .	223,474	697	643	672	729	683	696	721	766	681	647	689	711	8335	4358	3977	1187		
11	Kincardine, . . . . .	34,724	102	84	89	79	106	88	85	109	68	109	82	100	1101	564	537	156		
IV. EAST-MIDLAND.																				
12	Forfar, . . . . .	206,750	709	659	786	717	638	703	706	661	676	704	681	699	8339	4297	4042	957		
13	Perth, . . . . .	133,198	295	284	321	309	305	296	325	274	310	290	281	317	3607	1920	1687	369		
14	Fife, . . . . .	155,021	448	392	486	462	433	420	461	402	406	495	426	414	5245	2728	2517	394		
15	Kinross, . . . . .	8,731	20	19	17	26	22	16	18	14	16	17	19	14	218	115	103	20		
16	Clackmannan, . . . . .	20,122	57	55	72	77	85	53	78	77	53	66	42	46	761	389	372	71		
V. WEST-MIDLAND.																				
17	Stirling, . . . . .	88,138	321	238	308	304	341	255	306	274	229	287	271	255	3389	1705	1684	284		
18	Dumbarton, . . . . .	54,179	170	145	211	185	215	180	187	173	162	171	188	180	2167	1129	1038	151		
19	Argyll, . . . . .	83,859	161	165	186	173	203	184	190	164	148	189	191	182	2136	1099	1037	170		
20	Bute, . . . . .	16,331	30	41	34	27	35	28	41	29	32	27	28	34	386	198	188	30		
VI. SOUTH-WESTERN.																				
1	Renfrew, . . . . .	168,746	622	553	649	660	643	616	600	597	497	590	558	592	7177	3724	3453	516		
2	Ayr, . . . . .	199,063	662	586	677	714	704	609	614	577	532	583	524	587	7369	3773	3596	685		
3	Lanark, . . . . .	640,444	2497	2317	2820	2707	2566	2645	2549	2347	2287	2422	2430	2432	30019	15309	14710	2524		
VII. SOUTH-EASTERN.																				
4	Linlithgow, . . . . .	39,045	130	138	170	160	160	149	153	133	132	141	142	140	1748	959	789	148		
5	Edinburgh, . . . . .	274,093	917	830	1005	949	929	987	939	888	858	920	916	968	11106	5597	5509	996		
6	Haddington, . . . . .	37,626	99	93	121	92	93	106	93	104	110	99	104	90	1204	629	575	124		
7	Berwick, . . . . .	36,488	111	81	111	102	101	88	86	79	74	93	91	87	1104	585	519	125		
8	Peebles, . . . . .	11,300	30	26	46	30	49	38	27	27	21	27	31	32	384	213	171	45		
9	Selkirk, . . . . .	10,410	33	29	43	46	51	48	51	33	30	29	46	37	476	250	226	48		
VIII. SOUTHERN.																				
0	Roxburgh, . . . . .	53,722	177	136	130	136	159	170	134	140	141	143	117	142	1695	876	819	214		
1	Dumfries, . . . . .	75,904	190	171	183	179	222	189	213	170	186	183	201	169	2256	1155	1101	375		
2	Kirkcudbright, . . . . .	42,745	93	102	114	123	116	118	130	97	109	100	98	93	1293	647	646	192		
3	Wigtown, . . . . .	41,845	105	83	107	93	99	102	105	86	97	89	96	87	1149	585	564	208		



## DEATHS

REGISTERED IN SCOTLAND DURING EACH MONTH OF THE YEAR 1869.

		POPULATION.	DEATHS.														Total Deaths.	Males	Females
		1861	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec					
SCOTLAND, -		3,062,294	6619	6172	7640	6650	6424	6375	5848	5410	5274	5430	6515	7432	75789	37871	37918		
DIVISIONS.																			
1	NORTHERN, . . .	130,422	168	175	207	194	182	194	141	127	146	147	160	193	2034	973	1061		
2	NORTH-WESTERN, . .	167,329	242	262	341	287	245	267	206	192	189	191	217	251	2890	1452	1438		
3	NORTH-EASTERN, . .	366,783	610	603	768	628	543	503	459	469	448	427	482	596	6536	3187	3349		
4	EAST-MIDLAND, . . .	523,822	1089	1035	1073	918	882	961	883	866	920	975	1173	1302	12077	5933	6144		
5	WEST-MIDLAND, . . .	242,507	463	403	484	451	465	433	422	412	414	452	487	535	5421	2778	2643		
6	SOUTH-WESTERN, . .	1,008,253	2763	2549	3357	2891	2815	2630	2521	2188	2140	2224	2839	3229	32146	16160	15986		
7	SOUTH-EASTERN, . .	408,962	943	777	1077	910	943	1040	889	872	770	752	852	1000	10825	5505	5320		
8	SOUTHERN, . . .	214,216	341	368	333	371	349	347	327	284	247	262	305	326	3860	1883	1977		
I. NORTHERN.																			
1	Shetland, . . .	31,670	38	40	55	44	50	40	25	42	36	36	47	58	511	227	284		
2	Orkney, . . .	32,395	42	52	51	60	46	57	44	26	32	40	39	48	537	247	290		
3	Caithness, . . .	42,200	57	49	57	56	50	56	47	39	52	54	45	55	617	315	302		
4	Sutherland, . . .	24,157	31	34	44	34	36	41	25	20	26	17	29	32	369	184	185		
II. NORTH-WESTERN.																			
5	Ross and Cromarty, . .	82,427	105	118	149	120	123	129	97	95	85	99	96	140	1356	686	670		
6	Inverness, . . .	84,902	137	144	192	167	122	138	109	97	104	92	121	111	1534	766	768		
III. NORTH-EASTERN.																			
7	Nairn, . . .	8,347	12	16	30	20	19	16	19	8	17	17	22	19	215	102	113		
8	Elgin (or Moray), . .	44,218	61	79	122	71	88	75	67	60	54	51	43	62	833	412	421		
9	Banff, . . .	56,020	89	87	120	109	86	77	54	50	62	56	60	63	913	455	458		
10	Aberdeen, . . .	223,474	382	371	441	378	309	296	277	315	276	275	309	401	4030	1964	2066		
11	Kincardine, . . .	34,724	66	50	55	50	41	39	42	36	39	28	48	51	545	254	291		
IV. EAST-MIDLAND.																			
12	Forfar, . . .	206,750	495	502	531	424	431	454	392	432	483	519	618	690	5971	2906	3065		
13	Perth, . . .	133,198	239	226	230	216	188	214	212	202	198	220	254	280	2679	1335	1344		
14	Fife, . . .	155,021	280	261	258	233	226	240	228	202	210	205	264	270	2877	1407	1470		
15	Kinross, . . .	8,731	11	6	19	8	6	15	8	9	6	8	11	5	112	56	56		
16	Clackmannan, . . .	20,122	64	40	35	37	31	38	43	21	23	23	26	57	438	229	209		
V. WEST-MIDLAND.																			
17	Stirling, . . .	88,138	188	164	187	167	187	187	172	154	172	225	229	241	2273	1179	1094		
18	Dumbarton, . . .	54,179	113	119	105	124	119	97	100	115	104	97	118	119	1330	672	658		
19	Argyll, . . .	83,859	136	90	157	119	122	115	128	109	109	103	117	140	1445	736	709		
20	Bute, . . .	16,331	26	30	35	41	37	34	22	34	29	27	23	35	373	191	182		
VI. SOUTH-WESTERN.																			
21	Renfrew, . . .	168,746	434	361	482	425	431	433	404	389	382	377	472	502	5092	2539	2553		
22	Ayr, . . .	199,063	355	318	399	366	375	342	339	306	355	327	446	458	4386	2200	2186		
23	Lanark, . . .	640,444	1974	1870	2476	2100	2009	1855	1778	1493	1403	1520	1921	2269	22668	11421	11247		
VII. SOUTH-EASTERN.																			
24	Linlithgow, . . .	39,045	75	63	95	86	72	86	55	59	66	56	74	88	875	463	412		
25	Edinburgh, . . .	274,093	706	590	796	683	707	793	687	659	554	558	653	775	8161	4136	4025		
26	Haddington, . . .	37,626	79	58	86	53	77	69	61	63	61	61	61	57	786	413	373		
27	Berwick, . . .	36,488	50	36	57	50	48	52	50	55	46	53	37	49	583	278	305		
28	Peebles, . . .	11,300	16	10	18	23	17	19	14	22	17	10	9	13	188	98	90		
29	Selkirk, . . .	10,410	17	20	25	15	22	21	22	14	26	14	18	18	232	117	115		
VIII. SOUTHERN.																			
30	Roxburgh, . . .	53,722	85	88	87	91	91	104	83	75	63	74	77	77	995	492	503		
31	Dumfries, . . .	75,904	109	134	130	136	112	120	120	96	86	96	112	119	1370	659	711		
32	Kirkeudbright, . . .	42,745	81	82	62	72	76	78	63	49	44	52	59	74	792	373	419		
33	Wigtown, . . .	41,845	66	64	54	72	70	45	61	64	54	40	57	56	703	359	344		



## MARRIAGES

REGISTERED IN SCOTLAND DURING EACH MONTH OF THE YEAR 1869.

			POPULATION.		MARRIAGES.												
			1851	1861	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct.	Nov	Dec	Total
<b>SCOTLAND,</b>			2,888,742	3,062,294	2670	1345	1276	1251	1099	3246	2182	1429	1259	1473	2274	2579	2208
DIVISIONS.																	
1	NORTHERN,		127,035	130,422	55	72	40	25	39	36	27	21	32	32	45	144	56
2	NORTH-WESTERN,		175,735	167,329	98	84	61	43	29	70	43	33	32	43	58	112	70
3	NORTH-EASTERN,		348,366	366,783	189	135	119	91	130	357	184	152	107	172	217	370	222
4	EAST-MIDLAND,		515,966	523,822	463	198	179	177	193	517	310	213	185	214	439	438	352
5	WEST-MIDLAND,		241,447	242,507	172	77	79	90	51	222	111	96	84	87	149	197	141
6	SOUTH-WESTERN,		881,092	1,008,253	1182	522	510	547	427	1242	1122	593	551	613	936	813	905
7	SOUTH-EASTERN,		383,217	408,962	415	183	219	215	154	595	288	258	210	235	327	347	344
8	SOUTHERN,		215,884	214,216	96	74	69	63	76	207	97	63	58	77	103	158	114
I. NORTHERN.																	
1	Shetland,		31,078	31,670	17	25	8	5	5	3	3	7	8	2	8	53	14
2	Orkney,		31,455	32,395	7	21	14	9	21	9	7	4	8	8	17	31	15
3	Caithness,		39,782	42,200	22	17	14	8	8	17	12	9	11	18	13	46	19
4	Sutherland,		24,720	24,157	9	9	4	3	5	7	5	1	5	4	7	14	7
II. NORTH-WESTERN.																	
5	Ross and Cromarty,		83,781	82,427	44	38	24	28	15	28	16	10	10	17	29	47	30
6	Inverness,		91,954	84,902	54	46	37	15	14	42	27	23	22	26	29	65	40
III. NORTH-EASTERN.																	
7	Nairn,		8,076	8,347	3	3	3	4	4	5	1	2	5	2	3	7	4
8	Elgin (or Moray),		40,532	44,218	22	11	9	10	11	29	17	14	8	12	16	48	20
9	Banff,		51,353	56,020	28	13	16	9	13	38	25	16	10	27	24	49	20
10	Aberdeen,		213,591	223,474	127	98	83	65	92	250	132	109	77	115	151	227	152
11	Kincardine,		34,814	34,724	9	10	8	3	10	35	9	11	7	16	23	39	18
IV. EAST-MIDLAND.																	
12	Forfar,		193,627	206,750	238	114	86	89	98	268	155	108	87	101	152	169	160
13	Perth,		137,369	133,198	83	38	25	32	36	112	59	48	36	38	96	113	71
14	Fife,		153,789	155,021	120	41	60	50	56	111	78	48	60	69	158	147	99
15	Kinross,		9,626	8,731	6	3	3	1	1	7	4	1	1	0	11	3	4
16	Clackmannan,		21,555	20,122	16	2	5	5	2	19	14	8	1	6	22	6	10
V. WEST-MIDLAND.																	
17	Stirling,		83,802	88,138	77	35	37	35	17	105	39	41	30	47	74	86	62
18	Dumbarton,		46,995	54,179	46	12	19	35	21	60	45	27	25	21	32	40	38
19	Argyll,		94,042	83,859	41	22	21	15	11	39	21	24	25	14	30	58	32
20	Bute,		16,608	16,331	8	8	2	5	2	18	6	4	4	5	13	13	8
VI. SOUTH-WESTERN.																	
21	Renfrew,		157,950	168,746	211	98	91	85	77	197	185	131	86	100	158	117	153
22	Ayr,		189,973	199,063	176	68	71	70	54	211	113	95	72	80	135	154	129
23	Lanark,		533,169	640,444	795	356	348	392	296	834	824	367	393	433	643	542	622
VII. SOUTH-EASTERN.																	
24	Linlithgow,		30,590	39,045	24	13	22	14	10	45	21	9	12	11	25	26	24
25	Edinburgh,		259,493	274,093	321	143	164	162	111	457	236	222	172	183	261	243	267
26	Haddington,		36,363	37,626	26	9	9	12	19	45	9	9	17	17	21	27	22
27	Berwick,		36,165	36,488	22	11	12	21	9	32	14	11	3	12	11	32	19
28	Peebles,		10,804	11,300	3	2	6	4	3	7	2	3	3	3	2	8	4
29	Selkirk,		9,802	10,410	9	5	6	2	2	9	6	4	3	9	7	11	7
VIII. SOUTHERN.																	
30	Roxburgh,		51,225	53,722	32	19	20	24	17	53	32	20	14	16	20	49	31
31	Dumfries,		78,149	75,904	28	31	29	14	38	72	39	21	21	25	37	63	41
32	Kirkcudbright,		43,371	42,745	16	12	9	12	10	41	17	12	10	18	23	28	20
33	Wigtown,		43,139	41,845	20	12	11	13	11	41	9	10	13	18	23	18	19



## VACCINATIONS IN SCOTLAND—1868.

		Sucess- fully Vacci- nated.	Vacci- nation Post- poned.	Insusceptible of Vaccine Disease.			Died before Vacci- nation.	Removed from District before Vaccina- tion, or otherwise unaccount- ed for.	Total.
				On the ground of Constitu- tional Insuscep- tibility.	In respect of the children having already had Small-pox.	On the ground of previous Successful Vaccina- tion.			
	<b>SCOTLAND, -</b>	102140	914	277	7	230	9440	2613	115621
	<b>DIVISIONS.</b>								
1	NORTHERN, . . .	2761	165	11	0	14	175	119	3245
2	NORTH-WESTERN, . .	3748	259	46	0	0	369	151	4573
3	NORTH-EASTERN, . .	11886	60	44	0	11	878	53	12932
4	EAST-MIDLAND, . . .	16658	129	33	1	8	1545	272	18646
5	WEST-MIDLAND, . . .	7297	69	18	2	3	605	179	8173
6	SOUTH-WESTERN, . .	39377	103	71	3	177	3976	1360	45067
7	SOUTH-EASTERN, . .	14471	73	26	1	6	1358	388	16323
8	SOUTHERN, . . .	5942	56	28	0	11	534	91	6662
	<b>I. NORTHERN.</b>								
1	Shetland, . . .	602	47	0	0	0	39	73	761
2	Orkney, . . .	757	19	0	0	0	33	8	817
3	Caithness, . . .	962	93	3	0	12	70	26	1166
4	Sutherland, . . .	440	6	8	0	2	33	12	501
	<b>II. NORTH-WESTERN.</b>								
5	Ross and Cromarty, .	1811	131	34	0	0	146	57	2179
6	Inverness, . . .	1937	128	12	0	0	223	94	2394
	<b>III. NORTH-EASTERN.</b>								
7	Nairn, . . .	210	1	2	0	9	20	0	242
8	Elgin or Moray, . .	1279	13	11	0	0	102	13	1418
9	Banff, . . .	1762	19	4	0	0	109	13	1897
10	Aberdeen, . . .	7562	23	25	0	2	587	33	8232
11	Kincardine, . . .	1073	4	2	0	0	60	4	1143
	<b>IV. EAST-MIDLAND.</b>								
12	Forfar, . . .	7588	23	18	0	7	839	138	8613
13	Perth, . . .	3406	28	3	0	0	257	67	3761
14	Fife, . . .	4823	77	12	0	1	372	57	5342
15	Kinross, . . .	194	1	0	0	0	10	3	208
16	Clackmannan, . . .	647	0	0	1	0	67	7	722
	<b>V. WEST-MIDLAND.</b>								
17	Stirling, . . .	3117	33	4	0	0	281	39	3474
18	Dumbarton, . . .	1956	10	1	1	3	174	44	2189
19	Argyll, . . .	1868	22	12	1	0	121	83	2112
20	Bute, . . .	356	4	1	0	0	29	8	398
	<b>VI. SOUTH-WESTERN.</b>								
21	Renfrew, . . .	6284	25	23	2	22	662	216	7234
22	Ayr, . . .	7015	20	10	0	4	498	103	7650
23	Lanark, . . .	26078	58	38	1	151	2816	1041	30183
	<b>VII. SOUTH-EASTERN.</b>								
24	Linlithgow, . . .	1618	7	2	0	0	148	40	1815
25	Edinburgh, . . .	9868	52	16	1	3	959	308	11207
26	Haddington, . . .	1105	4	4	0	1	100	25	1239
27	Berwick, . . .	1120	2	3	0	1	76	6	1208
28	Peebles, . . .	351	3	0	0	0	24	4	382
29	Selkirk, . . .	409	5	1	0	1	51	5	472
	<b>VIII. SOUTHERN.</b>								
30	Roxburgh, . . .	1626	9	5	0	0	132	10	1782
31	Dumfries, . . .	2088	34	14	0	11	199	33	2379
32	Kirkcudbright, . .	1172	7	6	0	0	118	32	1335
33	Wigtown, . . .	1056	6	3	0	0	85	16	1166



Total DEATHS from all Causes at Four Periods of Life 45  
in the Eight Principal Towns of Scotland.—Year 1869.

CAUSES OF DEATH.	AGES.				Total.	CAUSES OF DEATH.	AGES.				Total.
	0-5	5-20	20-60	Above 60			0-5	5-20	20-60	Above 60	
ALL CAUSES . . . .	14071	3425	8940	5014	31450	IV. Cephalitis . . .	109	55	31	6	201
SPECIFIED CAUSES . .	13855	3391	8823	4999	31068	Apoplexy . . . .	79	24	181	209	493
DISEASES :—						Paralysis . . . .	3	6	226	419	654
I. Zymotic Class . .	5066	1426	1447	339	8278	Delirium Tremens .	—	—	25	2	27
II. Dropsy, Cancer, } and others of } uncertain scat . }	82	75	479	349	985	Chorea . . . . .	1	2	1	—	4
III. Tubercular Class	1565	995	2431	126	5117	Epilepsy . . . . .	5	14	42	14	75
IV. Of Brain, etc. .	814	207	689	740	2450	Tetanus . . . . .	5	1	7	—	13
V. Of Heart, etc. .	19	67	677	446	1209	Insanity . . . . .	—	—	14	5	19
VI. Of Resp. Organs .	3322	243	1477	1156	6198	Convulsions . . .	516	21	4	2	543
VII. Of Digest. Organs	1097	104	525	277	2003	Dis. of Brain, etc.	96	84	158	83	421
VIII. Of Kidneys, etc.	31	52	190	94	367	V. Pericarditis . .	—	2	5	3	10
IX. Of Uterus, etc. .	—	14	245	13	272	Aneurism . . . .	—	—	43	9	52
X. Of Joints, Bones, etc.	17	56	63	26	162	Dis. of Heart, etc.	19	65	629	434	1147
XI. Of Skin, etc. . .	13	—	10	9	32	VI. Laryngitis . . .	39	2	11	5	57
XII. Malformations .	56	—	—	—	56	Bronchitis . . . .	2584	111	822	864	4381
XIII. Debility from Pre- } mature Birth . }	1428	—	—	—	1428	Pleurisy . . . . .	8	10	44	17	79
XIV. Atrophy . . . .	92	21	83	—	196	Pneumonia . . . .	630	92	381	132	1235
XV. Age . . . . .	—	—	—	1263	1263	Asthma . . . . .	1	—	103	93	197
XVI. Sudden . . . .	25	5	51	25	106	Dis. of Lungs, etc.	60	28	116	45	249
XVII. Violence, } tion, etc. . }	228	126	456	136	946	VII. Teething . . .	540	—	—	—	540
I. Small-pox . . .	29	10	12	—	51	Quinsey . . . . .	36	4	2	1	43
Measles . . . . .	841	56	4	—	901	Gastritis . . . . .	27	2	19	8	56
Scarlatina . . . .	1415	803	31	1	2250	Enteritis . . . . .	254	31	53	15	353
Diphtheria . . . .	146	29	8	—	183	Peritonitis . . . .	12	16	56	13	97
Hooping-Cough . .	1294	65	1	—	1360	Ascites . . . . .	1	1	9	5	16
Croup . . . . .	353	31	—	—	384	Ulcer. of Intest. .	3	1	24	9	37
Thrush . . . . .	14	—	—	—	14	Hernia . . . . .	4	1	16	11	32
Diarrhoea . . . .	498	29	87	99	713	Ileus . . . . .	24	10	30	37	101
Dysentery . . . .	19	1	19	25	64	Intussusception .	3	1	3	4	11
Cholera . . . . .	32	4	10	5	51	Strict. of Intest. .	1	—	3	5	9
Influenza . . . .	11	3	16	33	63	Dis. of Stomach .	138	17	97	59	311
Purpura; Scurvy .	3	4	3	1	11	Dis. of Pancreas .	—	—	1	—	1
Ague . . . . .	—	—	1	1	2	Hepatitis . . . .	6	3	22	11	42
Worms . . . . .	3	2	—	—	5	Jaundice . . . . .	28	2	15	15	60
Typhus Fever . . .	90	192	951	109	1342	Dis. of Liver . . .	19	14	169	83	285
Enteric Fever . . .	106	138	162	28	434	Dis. of Spleen . .	1	1	6	1	9
Relapsing Fever .	10	12	1	1	24	VIII. Nephritis . . .	11	7	15	1	34
Simple Cont. Fever	6	8	6	1	21	Nephria . . . . .	6	21	63	20	110
Infant. Rem. Fever	50	11	—	—	61	Addison's Disease	—	—	3	—	3
Metria . . . . .	—	5	62	—	67	Ischuria . . . . .	1	1	6	7	15
Rheumatic Fever .	1	9	28	5	43	Diabetes . . . . .	1	6	21	5	33
Erysipelas . . . .	49	7	31	29	116	Stone . . . . .	1	2	6	8	17
Pyæmia . . . . .	—	3	4	—	7	Cystitis . . . . .	2	1	6	12	21
Syphilis . . . . .	93	2	10	1	106	Strict. of Urethra .	—	—	4	1	5
Noma . . . . .	3	2	—	—	5	Dis. of Kidneys . .	9	14	66	40	129
Hydrophobia . . .	—	—	—	—	—	IX. Paramenia . . .	—	1	6	—	7
II. Hæmorrhage . . .	11	6	21	7	45	Ovarian Dropsy . .	—	—	16	3	19
Dropsy . . . . .	44	47	148	132	371	Childbirth . . . .	—	12	186	—	198
Abscess . . . . .	17	8	29	11	65	Dis. of Uterus . . .	—	1	37	10	48
Ulcer . . . . .	4	1	7	11	23	X. Arthritis . . . .	1	2	4	2	9
Fistula . . . . .	—	1	6	1	8	Rheumatism . . . .	—	6	24	17	47
Mortification . . .	3	4	9	20	36	Dis. of Joints, etc.	16	48	35	7	106
Cancer . . . . .	3	8	257	166	434	XI. Carbuncle . . .	1	—	4	4	9
Gout . . . . .	—	—	2	1	3	Phlegmon . . . . .	2	—	2	1	5
III. Scrofula . . . .	80	71	56	4	211	Dis. of Skin . . . .	10	—	4	4	18
Tabes Mesenterica	316	56	16	2	390	XVII. Intemperance .	—	1	48	5	54
Phthisis . . . . .	348	750	2354	120	3572	Privation of Food .	—	—	3	1	4
Hydrocephalus . .	821	118	5	—	944	Wt. Breast-milk . .	78	—	—	—	78
						Neglect . . . . .	—	—	—	—	—
						Cold . . . . .	2	—	1	—	3
						Poison . . . . .	5	1	7	—	13
						Poisoned Wounds .	1	—	2	2	5
						Burns and Scalds .	50	21	13	11	95
						Hanging, etc. . . .	—	—	14	8	22
						Suffocation . . . .	38	2	12	11	63
						Drowning . . . . .	7	29	92	18	146
						Fractures & Contus.	34	58	207	72	371
						Gunshot Wounds . .	—	1	5	1	7
						Cuts and Stabs . . .	1	2	12	—	15
						Other Vio. Causes .	12	11	40	7	70
						Not specified . . .	216	34	117	15	382



# DEATHS from all Causes at Four Periods of Life Year 1869.

CAUSES OF DEATH.	GLASGOW.					EDINBURGH.					DUNDEE.					ABERDEEN.				
	0-5	5-20	20-60	60, etc.	Total.	0-5	5-20	20-60	60, etc.	Total.	0-5	5-20	20-60	60, etc.	Total.	0-5	5-20	20-60	60, etc.	Total.
ALL CAUSES . . .	7539	1728	4510	1863	15640	2156	456	1601	1190	5403	1567	486	946	563	3562	514	165	579	526	1784
SPECIFIED CAUSES . . .	7467	1710	4437	1855	15469	2138	454	1595	1188	5375	1547	480	931	561	3519	501	165	572	526	1764
DISEASES :—																				
I. Zymotic Class	2605	656	886	145	4292	768	176	176	52	1172	654	275	122	41	1092	118	35	82	51	286
II. Dropsy, Cancer, and others of uncertain seat	35	38	181	117	371	20	12	102	97	231	6	10	61	36	113	4	4	47	36	91
III. Tubercular Class	842	542	1137	49	2570	219	132	437	20	803	148	105	303	23	579	71	78	175	13	337
IV. Of Brain, etc.	417	114	291	251	1073	161	28	156	199	544	88	23	64	70	245	54	11	56	71	192
V. Of Heart, etc.	4	30	276	129	439	4	12	172	143	331	4	7	80	44	135	2	—	40	55	97
VI. Of Resp. Organs	2038	146	864	512	3560	495	28	255	263	1041	296	20	153	121	590	93	18	67	117	295
VII. Of Digest. Organs	604	53	244	94	995	138	21	107	67	333	105	6	44	16	171	58	2	39	37	136
VIII. Of Kidneys, etc.	16	20	80	34	150	6	12	45	29	92	2	6	15	4	27	1	3	25	17	46
IX. Of Uterus, etc.	—	7	140	5	152	—	1	37	4	42	—	3	18	1	22	—	—	14	1	15
X. Of Joints, Bones, etc.	7	20	27	9	63	1	20	14	7	42	2	3	5	2	12	1	4	4	3	12
XI. Of Skin, etc.	7	—	2	2	11	1	—	3	1	5	—	—	2	—	2	4	—	—	1	5
XII. Malformations	20	—	—	—	20	13	—	—	—	13	7	—	—	—	7	5	—	—	—	5
XIII. Debility from Pre-mature Birth	710	—	—	—	710	234	—	—	—	234	206	—	—	—	206	69	—	—	—	69
XIV. Atrophy	43	11	45	—	99	24	1	14	—	39	6	—	8	—	14	3	1	3	—	7
XV. Age	—	—	—	446	446	—	—	—	275	275	—	—	—	187	187	—	—	—	109	109
XVI. Sudden	13	4	36	16	69	1	—	—	2	3	4	1	6	2	13	—	—	2	1	3
XVII. Violence, Privation, etc.	106	69	228	46	449	53	11	77	29	170	19	21	50	14	104	18	9	18	14	59
I. Small-pox	7	—	—	—	7	—	—	—	—	—	3	—	—	—	3	—	—	—	—	—
Measles	610	42	2	—	654	108	5	—	—	113	1	1	—	—	2	8	—	—	—	8
Scarlatina	580	304	10	1	895	106	82	3	—	191	434	227	8	—	669	4	4	—	—	8
Diphtheria	73	17	4	—	94	27	6	3	—	36	14	3	—	—	17	9	2	—	—	11
Hooping-Cough	684	34	1	—	719	299	16	—	—	315	66	2	—	—	62	15	1	—	—	16
Croup	165	16	—	—	181	63	6	—	—	69	34	—	—	—	34	26	4	—	—	30
Thrush	3	—	—	—	3	2	—	—	—	2	2	—	—	—	2	6	—	—	—	6
Diarrhoea	215	11	36	30	292	95	4	32	18	149	61	7	8	9	85	24	—	4	16	44
Dysentery	8	1	4	2	15	1	—	7	4	12	5	—	5	10	20	3	—	—	4	7
Cholera	9	—	6	3	18	7	—	2	1	10	12	3	1	1	17	—	—	—	—	—
Influenza	5	2	7	17	31	3	—	1	3	7	2	1	1	6	10	—	—	5	5	10
Purpura; Scurvy	1	2	2	—	5	—	2	—	1	3	2	—	—	—	2	—	—	—	—	—
Ague	—	—	1	—	1	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—
Worms	2	1	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Typhus Fever	59	132	688	69	948	11	21	53	8	93	2	13	73	8	96	3	10	40	14	67
Enteric Fever	73	67	73	8	221	12	24	34	7	77	4	14	11	2	31	6	11	20	8	45
Relapsing Fever	7	5	—	—	12	3	—	—	1	4	—	3	1	—	4	—	—	—	—	—
Simple Cont. Fever	2	4	2	1	9	1	2	2	—	5	1	1	—	—	2	—	—	—	—	—
Infant. Rem. Fever	26	5	—	—	31	2	—	—	—	2	7	—	—	—	7	1	—	—	—	11
Metria	—	2	24	—	26	—	2	12	—	14	—	—	8	—	8	—	—	7	—	7
Rheumatic Fever	1	2	8	2	13	—	3	12	1	16	—	—	3	1	4	—	1	3	—	4
Erysipelas	30	5	14	12	61	11	1	10	7	29	—	—	3	3	6	3	1	2	4	10
Pyæmia	—	3	1	—	4	—	—	2	—	2	—	—	—	—	—	—	—	—	—	—
Syphilis	45	1	3	—	49	15	1	3	—	19	10	—	—	1	11	9	—	1	—	10
Noma	—	—	—	—	—	2	1	—	—	3	—	—	—	—	—	1	1	—	—	2
Hydrophobia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
II. Hæmorrhage	4	5	11	1	21	6	—	4	1	11	1	—	2	1	4	—	—	3	2	5
Dropsy	18	22	61	57	158	8	9	16	19	52	5	7	33	15	60	2	4	6	9	21
Abscess	8	6	8	1	23	5	1	6	5	17	—	—	6	—	6	2	—	4	2	8
Ulcer	1	—	—	4	5	1	1	4	5	11	—	—	—	—	—	—	—	—	1	11
Fistula	—	—	3	1	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mortification	1	1	3	10	15	—	—	4	5	9	—	1	—	—	1	—	—	1	3	4
Cancer	3	4	95	43	145	—	1	68	62	131	—	2	19	19	40	—	—	32	19	51
Gout	—	—	—	—	—	—	—	—	—	—	—	—	1	1	2	—	—	1	—	11
III. Scrofula	44	30	20	1	95	15	16	14	—	45	6	6	3	1	16	3	10	5	—	18
Tabes Mesenterica	164	32	9	2	207	52	10	1	—	63	25	1	2	—	28	8	2	1	—	11
Phthisis	220	439	1107	46	1812	23	84	420	20	547	31	86	297	22	436	15	49	169	13	246
Hydrocephalus	414	41	1	—	456	129	22	2	—	153	86	12	1	—	99	45	17	—	—	62



in each of the Eight Principal Towns of Scotland. 47  
Year 1869.

CAUSES OF DEATH.	PAISLEY.					GREENOCK.					LEITH.					PERTH.					Grand Total.
	0-5	5-20	20-60	60,etc.	Total.	0-5	5-20	20-60	60,etc.	Total.	0-5	5-20	20-60	60,etc.	Total.	0-5	5-20	20-60	60,etc.	Total.	
ALL CAUSES . . . . .	618	183	354	294	1449	831	190	507	221	1749	599	101	272	197	1169	247	116	171	160	694	31450
SPECIFIED CAUSES . . . . .	594	183	354	294	1425	771	183	495	218	1667	594	100	270	197	1161	243	116	169	160	688	31068
DISEASES :—																					
I. Zymotic Class . . . . .	249	79	42	15	385	321	71	97	15	504	237	55	26	13	331	114	79	16	7	216	8278
II. Dropsy, Cancer, and others of uncertain seat . . . . .	4	7	31	28	70	9	2	25	12	48	2	1	25	11	39	2	1	7	12	22	98
III. Tubercular Class . . . . .	86	48	108	9	251	98	53	155	8	314	75	18	65	3	161	26	19	51	1	97	5117
IV. Of Brain, etc. . . . .	26	14	42	52	134	30	8	34	35	107	26	4	26	37	93	12	5	20	25	62	2450
V. Of Heart, etc. . . . .	1	4	22	7	34	3	7	45	27	82	1	4	22	20	47	-	3	20	21	44	1209
VI. Of Resp. Organs . . . . .	85	7	43	49	184	140	19	48	37	244	138	4	32	30	204	37	1	15	27	80	6198
VII. Of Digest. Organs . . . . .	72	11	21	12	116	78	7	24	19	128	30	4	33	19	86	12	-	13	13	38	2008
VIII. Of Kidneys, etc. . . . .	4	3	4	1	12	-	3	11	3	17	2	2	3	2	9	-	3	7	4	14	367
IX. Of Uterus, etc. . . . .	-	1	13	1	15	-	2	8	-	10	-	-	10	1	11	-	-	5	-	5	277
X. Of Joints, Bones, etc. . . . .	1	4	4	4	13	2	2	5	1	10	3	3	2	-	8	-	-	2	-	2	163
XI. Of Skin, etc. . . . .	-	-	-	2	2	1	-	2	1	4	-	-	1	-	1	-	-	-	2	2	38
XII. Malformations . . . . .	2	-	-	-	2	2	-	-	-	2	5	-	-	-	5	2	-	-	-	2	50
XIII. Debility from Pre-mature Birth . . . . .	55	-	-	-	55	64	-	-	-	64	60	-	-	-	60	30	-	-	-	30	1428
XIV. Atrophy . . . . .	4	2	8	-	14	6	2	2	-	10	4	3	2	-	9	2	1	1	-	4	190
XV. Age . . . . .	-	-	-	103	103	-	-	-	52	52	-	-	-	48	48	-	-	-	43	43	1268
XVI. Sudden . . . . .	1	-	1	1	3	3	-	4	1	8	-	-	-	1	1	3	-	2	1	6	100
XVII. Violence, Privation, etc. . . . .	4	3	15	10	32	14	7	35	7	63	11	2	23	12	48	3	4	10	4	21	940
I. Small-pox . . . . .	4	-	-	-	4	15	10	12	-	37	-	-	-	-	-	-	-	-	-	-	57
Measles . . . . .	24	1	-	-	25	33	3	1	-	37	57	4	1	-	62	-	-	-	-	-	907
Scarlatina . . . . .	42	43	1	-	86	111	37	2	-	150	54	38	2	-	94	84	68	5	-	157	2250
Diphtheria . . . . .	5	-	-	-	5	8	-	-	-	8	9	1	1	-	11	1	-	-	-	1	188
Hooping-Cough . . . . .	119	9	-	-	128	54	2	-	-	56	57	-	-	-	57	6	1	-	-	7	1360
Croup . . . . .	20	-	-	-	20	18	2	-	-	20	17	1	-	-	18	10	2	-	-	12	388
Thrush . . . . .	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	14
Diarrhoea . . . . .	11	2	2	10	25	58	4	4	5	71	26	-	-	5	31	8	1	1	6	16	713
Dysentery . . . . .	2	-	1	1	4	-	-	-	2	2	-	-	1	2	3	-	-	1	-	1	64
Cholera . . . . .	1	-	1	-	2	3	-	-	-	3	-	-	-	-	-	-	1	-	-	1	57
Influenza . . . . .	-	-	-	-	-	1	-	2	1	4	-	-	-	1	1	-	-	-	-	-	68
Purpura; Scurvy . . . . .	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	11
Ague . . . . .	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	2
Worms . . . . .	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	1	-	-	1	8
Typhus Fever . . . . .	2	5	23	1	31	10	9	61	7	87	1	2	8	2	13	2	-	5	-	7	1341
Enteric Fever . . . . .	-	11	9	1	21	3	2	6	-	11	8	6	8	1	23	-	3	1	1	5	433
Relapsing Fever . . . . .	-	4	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23
Simple Cont. Fever . . . . .	-	-	2	-	2	1	-	-	-	1	-	-	-	-	-	1	1	-	-	2	21
Infant. Rem. Fever . . . . .	13	4	-	-	17	1	1	-	-	2	-	1	-	-	1	-	-	-	-	-	61
Metria . . . . .	-	-	1	-	1	-	-	7	-	7	-	1	1	-	2	-	-	2	-	2	67
Rheumatic Fever . . . . .	-	-	-	1	1	-	1	-	-	1	-	1	1	-	2	-	1	1	-	2	43
Erysipelas . . . . .	1	-	-	1	2	1	-	1	-	2	3	-	1	2	6	-	-	-	-	-	110
Pyæmia . . . . .	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	7
Syphilis . . . . .	5	-	2	-	7	2	-	-	-	2	5	-	1	-	6	2	-	-	-	2	100
Noma . . . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Hydrophobia . . . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
II. Hæmorrhage . . . . .	-	1	-	-	1	-	-	-	-	-	-	-	1	1	2	-	-	-	1	1	48
Dropsy . . . . .	3	4	15	16	38	7	1	8	6	22	-	-	8	4	12	1	-	1	6	8	371
Abscess . . . . .	-	-	-	3	3	-	-	-	-	-	1	1	4	-	6	1	-	1	-	2	63
Ulcer . . . . .	-	-	1	-	1	1	-	2	1	4	1	-	-	-	1	-	-	-	-	-	23
Fistula . . . . .	-	1	2	-	3	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	8
Mortification . . . . .	1	1	1	-	3	1	1	-	-	2	-	-	-	1	1	-	-	-	1	1	30
Cancer . . . . .	-	-	12	9	21	-	-	15	5	20	-	-	11	5	16	-	1	5	4	10	434
Gout . . . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
III. Scrofula . . . . .	3	2	5	2	12	4	3	4	-	11	3	2	1	-	6	2	2	4	-	8	211
Tabes Mesenterica . . . . .	30	6	-	-	36	14	1	2	-	17	21	3	1	-	25	2	1	-	-	3	390
Phthisis . . . . .	18	34	103	7	162	30	38	149	8	225	7	11	62	3	83	4	9	47	1	61	3572
Hydrocephalus . . . . .	35	6	-	-	41	50	11	-	-	61	44	2	1	-	47	18	7	-	-	25	944



# 48 DEATHS from all Causes at Four Periods of Life Year 1869.

CAUSES OF DEATH.	GLASGOW.					EDINBURGH.					DUNDEE.					ABERDEEN.				
	0-5	5-20	20-60	60,etc.	Total.	0-5	5-20	20-60	60,etc.	Total.	0-5	5-20	20-60	60,etc.	Total.	0-5	5-20	20-60	60,etc.	Total.
IV. Cephalitis . . .	53	31	9	2	95	27	7	12	2	48	4	2	3	1	10	9	4	2	1	16
Apoplexy . . .	36	14	78	67	195	19	4	33	55	111	10	3	16	21	50	1	-	10	21	32
Paralysis . . .	-	1	98	156	255	1	-	49	100	150	1	1	22	39	63	-	1	16	38	55
Delirium Tremens . . .	-	-	7	-	7	-	-	7	1	8	-	-	4	-	4	-	-	3	-	3
Chorea . . .	-	2	1	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Epilepsy . . .	2	6	14	5	27	1	1	13	4	19	1	3	3	1	8	-	2	5	1	8
Tetanus . . .	-	1	2	-	3	5	-	1	-	6	-	-	2	-	2	-	-	1	-	1
Insanity . . .	-	-	3	-	3	-	-	3	3	6	-	-	1	-	1	-	-	5	1	6
Convulsions . . .	270	12	3	2	287	92	1	1	-	94	67	4	-	-	71	41	1	-	-	42
Dis. of Brain, etc.	56	47	76	19	198	16	15	37	34	102	5	10	13	8	36	3	3	14	9	29
V. Pericarditis . . .	-	1	2	-	3	-	-	3	1	4	-	-	-	2	2	-	-	-	-	-
Aneurism . . .	-	-	20	2	22	-	-	14	5	19	-	-	1	-	1	-	-	2	2	4
Dis. of Heart, etc.	4	29	254	127	414	4	12	155	137	308	4	7	79	42	132	2	-	38	53	93
VI. Laryngitis . . .	19	-	6	2	27	8	1	2	2	13	5	1	1	-	7	1	-	2	1	4
Bronchitis . . .	1559	66	516	404	2545	379	15	129	188	711	262	13	73	75	423	67	6	38	96	207
Pleurisy . . .	3	3	15	8	29	3	2	19	3	27	1	1	3	1	6	1	3	5	2	11
Pneumonia . . .	424	59	205	50	738	91	8	66	29	194	28	5	47	23	103	23	5	15	9	52
Asthma . . .	-	-	58	36	94	-	-	10	21	31	-	-	22	19	41	-	-	3	4	7
Dis. of Lungs, etc.	33	18	64	12	127	14	2	29	20	65	-	-	7	3	10	1	4	4	5	14
VII. Teething . . .	257	-	-	-	257	58	-	-	-	58	77	-	-	-	77	41	-	-	-	41
Quinsey . . .	24	3	-	1	28	6	-	1	-	7	2	-	-	-	2	-	-	1	-	1
Gastritis . . .	16	-	12	2	30	5	1	-	-	6	-	1	1	3	5	2	-	1	1	4
Enteritis . . .	164	18	25	6	213	25	4	6	1	36	12	1	7	2	22	2	-	6	5	13
Peritonitis . . .	7	7	24	3	41	2	3	13	5	23	1	-	4	1	6	1	2	5	1	9
Ascites . . .	1	1	5	3	10	-	-	2	1	3	-	-	-	-	-	-	-	-	1	1
Ulcer. of Intest. . .	2	1	6	-	9	-	-	9	6	15	-	-	1	-	1	-	-	4	3	7
Hernia . . .	1	1	5	5	12	-	-	1	4	5	1	-	3	-	4	1	-	4	2	7
Ileus . . .	14	4	11	11	46	5	2	8	10	25	2	1	4	3	10	-	-	2	8	10
Intussusception . . .	-	1	1	4	6	2	-	-	-	2	-	-	1	-	1	1	-	-	-	1
Strict. of Intest. . .	1	-	1	-	2	-	-	-	2	2	-	-	2	-	2	-	-	-	2	2
Dis. of Stomach . . .	87	8	51	15	161	28	3	21	21	73	3	3	7	1	14	6	-	7	6	19
Dis. of Pancreas . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Hepatitis . . .	4	1	13	3	21	1	1	4	2	8	-	-	1	-	1	1	-	1	-	2
Jaundice . . .	12	1	5	5	23	2	-	5	3	10	7	-	2	1	10	3	-	-	1	4
Dis. of Liver . . .	13	6	82	36	137	4	7	37	11	59	-	-	11	5	16	-	-	7	7	14
Dis. of Spleen . . .	1	1	3	-	5	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-
VIII. Nephritis . . .	5	2	8	-	15	1	1	3	-	5	2	1	-	1	4	-	-	1	-	1
Nephria . . .	1	6	22	9	38	3	7	23	8	41	-	3	6	1	10	-	1	6	1	8
Addison's Disease . . .	-	-	1	-	1	-	-	1	-	1	-	-	-	-	-	-	-	1	-	1
Ischuria . . .	-	-	-	4	4	-	-	3	-	3	-	1	1	-	2	-	-	2	1	3
Diabetes . . .	1	2	9	3	15	-	1	3	2	6	-	-	3	-	3	-	1	2	-	3
Stone . . .	1	1	5	2	9	-	-	-	2	2	-	-	-	-	2	-	-	1	3	4
Cystitis . . .	2	-	5	1	8	-	1	1	5	7	-	-	-	2	2	-	-	-	2	2
Strict. of Urethra . . .	-	-	3	1	4	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-
Dis. of Kidneys . . .	6	9	27	14	56	2	2	11	12	27	-	1	4	-	5	1	1	12	10	24
IX. Paramenia . . .	-	-	2	-	2	-	-	3	-	3	-	1	-	-	1	-	-	-	-	-
Ovarian Dropsy . . .	-	-	3	1	4	-	-	7	2	9	-	-	-	-	-	-	-	5	-	5
Childbirth . . .	-	6	113	-	119	-	1	22	-	23	-	2	14	-	16	-	-	7	-	7
Dis. of Uterus . . .	-	1	22	4	27	-	-	5	2	7	-	-	4	1	5	-	-	2	1	3
X. Arthritis . . .	-	1	1	-	2	-	-	-	-	-	-	-	1	-	1	-	-	2	1	3
Rheumatism . . .	-	4	12	8	24	-	1	5	3	9	-	-	2	1	3	-	-	1	2	3
Dis. of Joints, etc.	7	15	14	1	37	1	19	9	4	33	2	3	2	1	8	1	4	1	-	6
XI. Carbuncle . . .	1	-	-	-	1	-	-	1	1	2	-	-	2	-	2	-	-	-	1	1
Phlegmon . . .	2	-	1	1	4	-	-	-	-	-	-	-	-	-	-	4	-	-	-	4
Disease of Skin . . .	4	-	1	1	6	1	-	2	-	3	-	-	-	-	-	-	-	-	-	-
XVII. Intemperance . . .	-	-	23	1	24	-	-	11	3	14	-	1	3	-	4	-	-	4	-	4
Privation of Food . . .	-	-	-	1	1	-	-	2	-	2	-	-	-	-	-	-	-	-	-	-
Wt. Breast-milk . . .	40	-	-	-	40	18	-	-	-	18	6	-	-	-	6	7	-	-	-	7
Neglect . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cold . . .	-	-	-	-	-	-	-	-	-	-	2	-	1	-	3	-	-	-	-	-
Poison . . .	3	1	3	-	7	-	-	1	-	1	-	-	1	-	1	1	-	1	-	2
Poisoned Wounds . . .	-	-	2	-	2	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-
Burns and Scalds . . .	26	11	5	3	45	7	2	-	2	11	5	7	2	-	14	2	1	-	1	4
Hanging, etc. . .	-	-	4	3	7	-	-	3	1	4	-	-	3	2	5	-	-	-	-	-
Suffocation . . .	11	2	8	3	24	15	-	2	4	21	2	-	1	-	3	3	-	-	1	4
Drowning . . .	5	15	52	8	80	1	-	1	3	3	-	4	12	2	18	1	3	6	3	13
Fractures . . .	14	35	108	24	181	9	8	45	15	77	3	5	20	8	36	2	3	5	9	19
Gunshot Wounds . . .	-	-	-	-	-	-	-	3	-	3	-	-	-	-	-	-	1	1	-	2
Cuts and Stabs . . .	1	-	5	-	6	-	-	2	-	2	-	2	2	-	4	-	-	-	-	-
Other Vio. Causes . . .	6	5	18	3	32	3	1	7	1	12	1	2	5	2	10	2	1	1	-	4
Not specified . . .	72	18	73	8	171	18	2	6	2	28	20	6	15	2	43	13	-	7	-	20



in each of the Eight Principal Towns of Scotland. 49  
Year 1869.

CAUSES OF DEATH.	PAISLEY.					GREENOCK.					LEITH.					PERTH.					Grand Total.
	0-5	5-20	20-60	60,etc.	Total.	0-5	5-20	20-60	60,etc.	Total.	0-5	5-20	20-60	60,etc.	Total.	0-5	5-20	20-60	60,etc.	Total.	
IV. Cephalitis . . .	-	6	1	-	7	8	2	2	-	12	8	2	1	-	11	-	1	1	-	2	201
Apoplexy . . .	9	3	18	11	41	3	-	12	11	26	1	-	10	11	22	-	-	4	12	16	493
Paralysis . . .	-	2	12	34	48	-	-	14	19	33	-	1	10	26	37	1	-	5	7	13	654
Delirium Tremens . . .	-	-	4	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	27
Chorea . . .	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Epilepsy . . .	1	1	3	2	7	-	-	1	-	1	-	-	1	-	1	-	1	2	1	4	75
Tetanus . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	13
Insanity . . .	-	-	1	-	1	-	-	-	1	1	-	-	-	-	-	-	-	1	-	1	19
Convulsions . . .	11	-	-	-	11	12	2	-	-	14	15	-	-	-	15	8	1	-	-	9	543
Dis. of Brain, etc.	4	2	3	5	14	7	4	5	4	20	2	1	4	-	7	3	2	6	4	15	421
V. Pericarditis . . .	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Aneurism . . .	-	-	2	-	2	-	-	2	-	2	-	-	1	-	1	-	-	1	-	1	52
Dis. of Heart, etc.	1	3	20	7	31	3	7	43	27	80	1	4	21	20	46	-	3	19	21	43	1147
VI. Laryngitis . . .	2	-	-	-	2	2	-	-	-	2	2	-	-	-	2	-	-	-	-	-	57
Bronchitis . . .	67	3	20	36	126	106	6	20	28	160	107	2	17	21	147	37	-	9	16	62	4381
Pleurisy . . .	-	-	-	1	1	-	-	1	2	3	-	-	1	-	1	-	1	-	-	1	79
Pneumonia . . .	15	4	17	9	45	22	9	17	4	52	27	2	9	2	40	-	-	5	6	11	1235
Asthma . . .	-	-	4	3	7	1	-	2	1	4	-	-	3	4	7	-	-	1	5	6	197
Dis. of Lungs, etc.	1	-	2	-	3	9	4	8	2	23	2	-	2	3	7	-	-	-	-	-	249
VII. Teething . . .	33	-	-	-	33	46	-	-	-	46	19	-	-	-	19	9	-	-	-	9	540
Quinsey . . .	2	1	-	-	3	1	-	-	-	1	1	-	-	-	1	-	-	-	-	-	43
Gastritis . . .	1	-	-	1	2	3	-	2	-	5	-	-	2	1	3	-	-	1	-	1	56
Enteritis . . .	30	3	3	1	37	14	2	2	-	18	5	3	1	-	9	2	-	3	-	5	353
Peritonitis . . .	-	2	-	1	3	1	2	4	1	8	-	-	6	-	6	-	-	-	1	1	97
Ascites . . .	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	1	-	1	16
Ulcer. of Intest. . .	-	-	1	-	1	1	-	-	-	1	-	-	2	-	2	-	-	1	-	1	37
Hernia . . .	-	-	-	-	-	-	-	2	-	2	1	-	-	-	1	-	-	1	-	1	32
Ileus . . .	-	1	1	-	2	1	1	2	2	6	2	1	2	3	8	-	-	-	-	-	101
Intussusception . . .	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
Strict. of Intest. . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	9
Dis. of Stomach . . .	3	2	2	1	8	9	1	3	4	17	1	-	5	5	11	1	-	1	6	8	311
Dis. of Pancreas . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Hepatitis . . .	-	1	1	3	5	-	-	-	-	-	-	-	2	3	5	-	-	-	-	-	42
Jaundice . . .	2	-	2	1	5	2	1	-	3	6	-	-	1	1	2	-	-	-	-	-	60
Dis. of Liver . . .	1	1	10	4	16	-	-	6	9	15	1	-	11	6	18	-	-	5	5	10	285
Dis. of Spleen . . .	-	-	-	-	-	-	-	2	-	2	-	-	1	-	1	-	-	-	-	-	9
VIII. Nephritis . . .	3	3	2	-	8	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	34
Nephria . . .	-	-	-	-	-	-	1	3	-	4	2	2	1	-	5	-	1	2	1	4	110
Addison's Disease . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Ischuria . . .	1	-	-	-	1	-	-	-	1	1	-	-	-	-	-	-	-	-	1	1	15
Diabetes . . .	-	-	1	-	1	-	1	-	-	1	-	-	-	-	-	-	1	3	-	4	33
Stone . . .	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	1	-	-	1	17
Cystitis . . .	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	1	1	21
Strict. of Urethra . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Dis. of Kidneys . . .	-	-	1	1	2	-	1	8	-	9	-	-	1	2	3	-	-	2	1	3	129
IX. Paramenia . . .	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
Ovarian Dropsy . . .	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19
Childbirth . . .	-	1	10	-	11	-	2	8	-	10	-	-	9	-	9	-	-	3	-	3	198
Dis. of Uterus . . .	-	-	1	1	2	-	-	-	-	-	-	-	1	1	2	-	-	2	-	2	48
X. Arthritis . . .	-	1	-	-	1	-	-	-	1	1	1	-	-	-	1	-	-	-	-	-	9
Rheumatism . . .	-	1	3	3	7	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	47
Dis. of Joints, etc.	1	2	1	1	5	2	2	5	-	9	2	3	1	-	6	-	-	2	-	2	106
XI. Carbuncle . . .	-	-	-	1	1	-	-	-	-	-	-	-	1	-	1	-	-	-	1	1	9
Phlegmon . . .	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	5
Disease of Skin . . .	-	-	-	1	1	1	-	1	1	3	-	-	-	-	-	-	-	-	1	1	18
XVII. Intemperance . . .	-	-	1	-	1	-	-	4	1	5	-	-	1	-	1	-	-	1	-	1	54
Privation of Food . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	4
Wt. Breast-milk . . .	-	-	-	-	-	5	-	-	-	5	2	-	-	-	2	-	-	-	-	-	78
Neglect . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cold . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Poison . . .	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	1	-	1	13
Poisoned Wounds . . .	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	5
Burns and Scalds . . .	-	-	1	1	2	5	-	4	1	10	4	-	1	2	7	1	-	-	1	2	95
Hanging, etc. . .	-	-	2	1	3	-	-	1	-	1	-	-	-	1	1	-	-	1	-	1	22
Suffocation . . .	1	-	-	-	1	1	-	-	1	2	3	-	1	2	6	2	-	-	-	2	63
Drowning . . .	-	2	4	-	6	-	1	11	1	13	-	2	5	2	9	-	2	1	1	4	146
Fractures . . .	3	1	6	7	17	2	4	10	3	19	1	-	11	4	16	-	2	2	2	6	371
Gunshot Wounds . . .	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	7
Cuts and Stabs . . .	-	-	-	-	-	-	-	1	-	1	-	-	2	-	2	-	-	-	-	-	15
Other Vio. Causes . . .	-	-	1	-	1	-	2	4	-	6	-	-	2	1	3	-	-	2	-	2	70
Not specified . . .	24	-	-	-	24	60	7	12	3	82	5	1	2	-	8	4	-	2	-	6	382



	MALE BIRTHS.												Total Male Births.
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
Glasgow, . . . .	763	684	865	848	802	819	823	730	722	769	831	762	9413
Edinburgh, . . . .	257	252	321	318	272	310	271	288	263	261	293	303	3409
Dundee, . . . .	177	177	219	177	183	197	192	171	180	193	181	209	2256
Aberdeen, . . . .	138	125	116	147	147	142	153	117	138	124	144	145	1636
Paisley, . . . .	72	68	69	78	86	69	77	75	69	79	74	54	870
Greenock, . . . .	119	85	117	111	84	123	115	112	84	112	91	115	1268
Leith, . . . .	75	59	77	67	69	75	85	74	69	95	93	76	914
Perth, . . . .	39	33	35	41	42	21	33	34	41	28	42	42	434
Total, 1869, . . . .	1640	1486	1819	1787	1685	1756	1749	1601	1566	1661	1749	1706	20205
Total, 1868, . . . .	1702	1553	1794	1814	1796	1902	1728	1616	1588	1665	1513	1595	20266
Total, 1867, . . . .	1667	1494	1689	1866	1832	1691	1699	1578	1544	1698	1662	1619	20059
Total, 1866, . . . .	1692	1553	1737	1691	1796	1705	1696	1558	1522	1679	1533	1588	19756
Total, 1865, . . . .	1711	1544	1727	1682	1830	1790	1548	1550	1533	1614	1505	1524	19558
Total, 1864, . . . .	1611	1515	1614	1753	1678	1654	1475	1568	1460	1544	1491	1599	18962
Total, 1863, . . . .	1543	1396	1582	1690	1687	1679	1481	1458	1472	1523	1446	1604	18561

	FEMALE BIRTHS.												Total Female Births.
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
Glasgow, . . . .	767	717	850	856	745	796	760	732	686	714	673	776	9072
Edinburgh, . . . .	303	265	288	281	284	284	300	246	266	256	272	301	3346
Dundee, . . . .	187	173	199	210	159	181	186	183	161	159	184	173	2155
Aberdeen, . . . .	116	106	125	129	129	106	125	129	124	127	128	122	1466
Paisley, . . . .	76	62	78	82	95	79	51	68	59	73	73	71	867
Greenock, . . . .	81	86	107	110	101	88	104	101	77	97	100	104	1156
Leith, . . . .	91	62	75	60	66	69	76	78	73	76	55	68	849
Perth, . . . .	30	37	33	37	33	39	36	26	32	32	28	36	399
Total, 1869, . . . .	1651	1508	1755	1765	1612	1642	1638	1563	1478	1534	1513	1651	19310
Total, 1868, . . . .	1645	1450	1674	1692	1701	1834	1655	1527	1457	1544	1489	1579	19247
Total, 1867, . . . .	1636	1499	1554	1714	1707	1583	1704	1468	1466	1667	1488	1487	18973
Total, 1866, . . . .	1618	1475	1635	1638	1746	1641	1495	1484	1378	1630	1477	1585	18802
Total, 1865, . . . .	1628	1516	1596	1588	1712	1668	1542	1485	1399	1507	1416	1460	18517
Total, 1864, . . . .	1496	1478	1540	1644	1659	1610	1407	1499	1386	1415	1436	1540	18110
Total, 1863, . . . .	1397	1348	1423	1498	1607	1658	1444	1399	1336	1461	1338	1425	17334

	BIRTHS—BOTH SEXES.												Total Births.
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
Glasgow, . . . .	1530	1401	1715	1704	1547	1615	1583	1462	1408	1483	1504	1538	18490
Edinburgh, . . . .	560	517	609	599	556	594	571	534	529	517	565	604	6755
Dundee, . . . .	364	350	418	387	342	378	378	354	341	352	365	382	4411
Aberdeen, . . . .	254	231	241	276	276	248	278	246	262	251	272	267	3102
Paisley, . . . .	148	130	147	160	181	148	128	143	128	152	147	125	1737
Greenock, . . . .	200	171	224	221	185	211	219	213	161	209	191	219	2424
Leith, . . . .	166	121	152	127	135	144	161	152	142	171	148	144	1763
Perth, . . . .	69	73	68	78	75	60	69	60	73	60	70	78	833
Total, 1869, . . . .	3291	2994	3574	3552	3297	3398	3387	3164	3044	3195	3262	3357	39515
Total, 1868, . . . .	3347	3003	3468	3506	3497	3736	3383	3143	3045	3209	3002	3174	39513
Total, 1867, . . . .	3303	2993	3243	3580	3539	3274	3403	3046	3010	3365	3150	3106	39012
Total, 1866, . . . .	3310	3028	3372	3329	3542	3346	3191	3042	2900	3309	3010	3173	38552
Total, 1865, . . . .	3339	3060	3323	3270	3542	3458	3090	3035	2932	3121	2921	2984	38075
Total, 1864, . . . .	3107	2993	3154	3397	3337	3264	2882	3067	2846	2959	2927	3139	37072
Total, 1863, . . . .	2940	2744	3005	3188	3294	3337	2925	2857	2808	2984	2784	3029	35895



ILLEGITIMATE BIRTHS IN EIGHT TOWNS—1869. 51

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Glasgow, . . . .	168	147	195	162	136	161	149	141	151	112	141	142	1808
Edinburgh, . . . .	57	50	60	62	53	56	62	52	44	62	62	61	681
Dundee, . . . .	52	40	46	50	49	43	45	26	34	34	38	46	503
Aberdeen, . . . .	26	28	24	24	29	33	37	30	32	30	34	35	362
Paisley, . . . .	15	11	14	16	15	16	6	12	14	11	21	13	164
Greenock, . . . .	16	10	13	10	6	17	6	11	10	13	13	8	133
Leith, . . . .	11	6	8	14	3	10	16	12	3	12	7	13	115
Perth, . . . .	9	12	8	8	7	6	6	3	8	4	5	6	82
Total, 1869, . . . .	354	304	368	346	298	342	327	287	296	278	324	324	3848
Total, 1868, . . . .	355	300	360	288	334	353	326	313	306	310	303	286	3834
Total, 1867, . . . .	308	316	337	344	317	293	378	307	303	338	304	299	3844
Total, 1866, . . . .	369	319	343	324	318	349	353	346	274	336	296	340	3967
Total, 1865, . . . .	332	282	311	314	340	359	311	308	268	278	297	294	3694
Total, 1864, . . . .	325	291	264	283	342	322	271	346	289	316	302	283	3634
Total, 1863, . . . .	272	283	270	283	291	343	280	302	275	303	309	335	3546

MARRIAGES IN THE EIGHT TOWNS—1869.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Glasgow, . . . .	537	223	250	273	215	551	600	240	271	288	442	331	4221
Edinburgh, . . . .	199	97	97	104	72	309	144	151	116	141	173	150	1753
Dundee, . . . .	133	59	55	66	61	133	71	68	49	53	103	68	919
Aberdeen, . . . .	58	52	51	34	37	82	64	73	45	69	61	56	682
Paisley, . . . .	59	22	27	22	23	52	38	60	19	22	40	21	408
Greenock, . . . .	60	40	25	31	23	76	68	40	41	40	49	39	532
Leith, . . . .	58	16	40	27	20	55	39	39	31	18	44	40	427
Perth, . . . .	30	11	5	10	5	41	22	16	15	15	30	19	219
Total, 1869, . . . .	1134	520	550	567	456	1299	1046	687	587	646	942	727	9161
Total, 1868, . . . .	1049	492	527	513	382	1269	943	612	578	575	859	807	8606
Total, 1867, . . . .	1049	509	510	573	436	1219	1034	583	638	577	899	840	8867
Total, 1866, . . . .	1168	599	501	641	462	1331	992	620	624	654	930	928	9450
Total, 1865, . . . .	1197	570	462	473	498	1227	1094	649	603	656	945	946	9320
Total, 1864, . . . .	1082	523	468	576	465	1172	983	711	559	615	846	884	8884
Total, 1863, . . . .	995	492	506	544	407	1190	979	633	518	621	913	795	8593
Total, 1862, . . . .	899	431	484	443	369	1070	902	551	535	513	730	767	7694
Total, 1861, . . . .	834	417	441	523	397	1007	873	523	535	522	833	828	7733
Total, 1860, . . . .	820	462	406	470	388	1006	876	556	499	566	768	843	7660



	MALE DEATHS.												Total Male Deaths.
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
Glasgow, . . . .	688	675	893	745	701	657	639	495	443	502	645	757	7840
Edinburgh, . . . .	238	198	279	232	248	293	233	206	189	160	202	259	2737
Dundee, . . . .	144	120	154	121	117	127	122	129	158	149	197	208	1746
Aberdeen, . . . .	82	78	94	72	63	59	65	66	51	66	75	90	861
Paisley, . . . .	51	45	60	64	58	63	66	63	52	52	58	62	694
Greenock, . . . .	82	60	94	84	74	77	74	69	73	75	91	76	929
Leith, . . . .	40	33	54	49	50	60	48	53	51	42	54	55	589
Perth, . . . .	25	31	16	13	23	19	19	37	40	45	44	40	352
Total, 1869, . . . .	1350	1240	1644	1380	1334	1355	1266	1118	1057	1091	1366	1547	15748
Total, 1868, . . . .	1192	1084	1215	1212	1155	1098	1224	1225	996	1163	1253	1321	14138
Total, 1867, . . . .	1351	1058	1209	1187	1226	1021	1072	909	990	993	1036	1182	13234
Total, 1866, . . . .	1261	1103	1301	1244	1248	1041	1095	982	905	1157	1170	1217	13724
Total, 1865, . . . .	1399	1388	1305	1110	1174	1068	1238	1084	956	1124	1307	1099	14252
Total, 1864, . . . .	1543	1373	1479	1222	1134	1135	1058	1147	984	1057	1122	1240	14494
Total, 1863, . . . .	1183	1072	1210	1163	1066	1101	1062	1087	1001	1039	1258	1362	13604

	FEMALE DEATHS.												Total Female Deaths.
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
Glasgow, . . . .	708	648	875	730	686	652	582	518	472	478	668	783	7800
Edinburgh, . . . .	256	211	257	209	230	261	213	230	143	168	240	248	2666
Dundee, . . . .	142	144	143	120	141	137	101	126	165	188	193	216	1816
Aberdeen, . . . .	91	82	87	92	65	69	58	59	62	71	80	107	923
Paisley, . . . .	55	52	71	65	66	67	78	53	53	63	64	68	755
Greenock, . . . .	74	55	76	56	52	71	56	74	61	54	90	101	820
Leith, . . . .	47	44	41	47	65	49	48	41	59	43	41	50	580
Perth, . . . .	26	30	24	29	23	25	22	25	23	27	46	42	342
Total, 1869, . . . .	1399	1266	1574	1348	1328	1331	1158	1126	1038	1097	1422	1615	15702
Total, 1868, . . . .	1231	1086	1194	1036	1093	1134	1134	1179	1069	1135	1221	1381	13893
Total, 1867, . . . .	1471	1140	1228	1160	1185	968	1082	946	911	976	1013	1197	13277
Total, 1866, . . . .	1267	1075	1323	1222	1270	1064	978	978	882	1140	1237	1268	13724
Total, 1865, . . . .	1413	1449	1288	1126	1137	1070	1182	1163	897	1109	1250	1163	14247
Total, 1864, . . . .	1608	1457	1436	1233	1099	1100	1049	1072	982	995	1132	1171	14334
Total, 1863, . . . .	1183	1114	1235	1010	1075	1104	1029	1070	964	1133	1192	1317	13426

	DEATHS—BOTH SEXES.												Total Deaths.
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
Glasgow, . . . .	1396	1323	1768	1475	1387	1309	1221	1013	915	980	1313	1540	15640
Edinburgh, . . . .	494	409	536	441	478	554	446	436	332	328	442	507	5403
Dundee, . . . .	286	264	297	241	258	264	223	255	323	337	390	424	3562
Aberdeen, . . . .	173	160	181	164	128	128	123	125	113	137	155	197	1784
Paisley, . . . .	106	97	131	129	124	130	114	116	105	115	122	130	1449
Greenock, . . . .	156	115	170	140	126	148	130	143	134	129	181	177	1749
Leith, . . . .	87	77	95	96	115	109	96	94	110	90	95	105	1169
Perth, . . . .	51	61	40	42	46	44	41	62	63	72	90	82	694
Total, 1869, . . . .	2749	2506	3218	2728	2662	2686	2424	2244	2095	2183	2788	3162	31450
Total, 1868, . . . .	2423	2170	2409	2248	2248	2232	2358	2404	2065	2298	2474	2702	28031
Total, 1867, . . . .	2822	2198	2437	2347	2411	1989	2154	1855	1901	1969	2049	2379	26511
Total, 1866, . . . .	2528	2178	2624	2466	2518	2105	2073	1960	1787	2297	2427	2485	27448
Total, 1865, . . . .	2812	2837	2593	2236	2311	2138	2420	2247	1853	2233	2557	2262	28499
Total, 1864, . . . .	3151	2830	2915	2455	2233	2235	2107	2219	1966	2052	2254	2411	28828
Total, 1863, . . . .	2366	2186	2445	2173	2141	2205	2091	2157	1965	2172	2450	2679	27030



ABSTRACT of the METEOROLOGY of the Eight Principal Towns of Scotland during the several Months of the Year 1869.

Mean Height above the Sea-level, 124 feet. Mean North Latitude, 56°12'. Mean West Longitude, 3°30'.

1869.	BAROMETER.		SELF-REGISTERING THERMOMETER. Mean of the Six Towns.						HYGROMETER.		DEDUCTIONS from Glaisher's Tables, 2nd Edit.				RAIN.		WINDS.									Pressure on square foot.
	Mean at 32° and Sea-level.	Monthly Range.	Highest in Month.	Lowest in Month.	Mean Temperature.	Monthly Range.	Mean Daily Range.	Greatest Daily Range.	Dry Bulb, or Mean Temp. of Air.	Wet Bulb, or Temp. of Evaporation.	Dew-point Temperature.	Elastic Force of Vapour.	Wt. of Vapour in Cubic Foot of Air.	Humidity, Sat. 100.	Number of Days it fell.	Amount.	Number of Days it blew in certain Directions.									
																	N	NE	E	SE	S	SW	W	NW	Calm or Variable.	
JANUARY, . . .	29·813	1·710	50·9	24·4	40·9	26·7	7·9	16·4	41·2	39·8	38·1	·230	2·67	89	19	5·20	2	0	3	3	8	7	6	2	0	1·84
FEBRUARY, . . .	29·713	1·470	56·7	29·1	42·8	27·6	9·9	18·7	41·9	40·3	38·2	·232	2·68	87	19	4·68	1	0	2	0	5	8	9	2	1	2·72
MARCH, . . .	29·913	1·464	53·3	25·8	38·5	27·4	11·9	23·4	37·7	35·6	32·8	·187	2·02	83	11	1·17	6	4	5	1	3	2	4	5	1	1·47
APRIL, . . .	29·937	1·507	69·4	28·3	47·5	41·0	14·8	27·6	46·7	43·8	40·5	·253	2·93	80	12	1·86	2	2	5	2	4	7	6	2	0	1·85
MAY, . . .	29·897	1·154	64·4	31·4	45·8	33·0	13·8	28·7	45·5	42·1	38·3	·232	2·68	76	13	1·05	2	5	13	2	1	1	4	3	0	1·76
JUNE, . . .	30·040	0·924	74·2	36·2	54·4	38·0	15·8	28·4	53·7	50·3	46·9	·321	3·64	77	10	2·41	4	3	4	2	2	3	8	3	1	1·30
JULY, . . .	29·963	0·788	79·9	43·6	60·0	36·3	16·3	31·7	59·5	56·0	52·9	·382	4·45	80	13	1·67	1	1	3	1	6	7	9	2	1	1·94
AUGUST, . . .	30·096	0·968	78·2	35·8	56·9	42·4	15·5	27·5	56·1	53·1	50·2	·366	4·08	80	8	0·92	2	2	2	1	2	4	11	5	2	1·59
SEPTEMBER, . . .	29·590	1·581	68·2	39·5	54·6	28·7	11·8	21·9	54·1	51·6	49·2	·350	3·97	84	21	6·54	1	1	2	2	5	6	9	2	2	2·03
OCTOBER, . . .	29·984	1·268	66·8	30·2	48·2	36·6	10·0	21·8	47·4	45·7	43·8	·286	3·25	88	15	3·07	3	2	2	2	2	4	9	5	2	1·81
NOVEMBER, . . .	29·755	1·151	57·3	23·4	40·8	33·8	10·0	22·5	40·0	38·1	35·7	·210	2·44	85	20	2·95	3	0	0	0	2	7	13	5	0	2·42
DECEMBER, . . .	29·738	2·263	52·0	17·0	35·8	34·9	9·7	19·5	35·3	34·0	32·0	·181	2·11	88	17	5·47	4	2	3	2	2	7	4	5	2	2·17
YEAR, . . .	29·870	1·354	79·9	17·0	47·2	33·9	12·3	28·7	46·6	44·2	41·5	·269	3·08	83	178	36·99	31	22	44	18	42	63	92	41	12	1·90

The absolute highest temperature, viz. 81°·5, was noted at Aberdeen in August; and the absolute lowest, viz. 13°·0, at Glasgow in December.

NOTE.—The figures under each month are the mean results from the eight Stations, as published in the Monthly Returns.



## BIRTHS, DEATHS, AND MARRIAGES

Registered during 1869 in the Town and Landward portions respectively of all the Burghal Districts of Scotland (with the exception of the Eight Principal Towns), and of all the other Districts embracing Towns with a population of 2000 and upwards at the Census of 1861.

(In a few cases the columns headed 'Town (or Burgh)' include the events occurring in adjoining villages; while in some instances the figures pertaining to the 'Landward' portion of the Districts embrace those occurring in one or more small Towns. In four or five cases, where a Town or Burgh happens to extend to two Registration Districts, the Births, etc., pertaining to the entire Town or Burgh are collectively stated.)

DISTRICTS.	TOWN (or Burgh).						LANDWARD.					
	Popula- tion, 1861.	BIRTHS.			DEATHS.	MARRIAGES.	Popula- tion, 1861.	BIRTHS.			DEATHS.	MARRIAGES.
		Legit.	Illegit.	Total.				Legit.	Illegit.	Total.		
Lerwick . . . . .	3061	89	6	95	66	35	570	19	2	21	13	6
Kirkwall and St. Ola . . . . .	3519	82	8	90	71	17	903	18	-	18	14	5
Thurso . . . . .	3426	94	10	104	54	20	2135	53	4	57	39	7
Wick . . . . .	7475	247	32	279	173	41	5366	119	20	139	69	20
Dornoch . . . . .	647	13	1	14	11	4	2238	52	3	55	25	11
Cromarty . . . . .	1491	38	3	41	27	5	809	18	1	19	7	-
Dingwall . . . . .	2084	62	3	65	49	15	328	8	1	9	6	1
Rosemarkie (including Fortrose) . . . . .	928	15	-	15	22	4	617	10	2	12	8	2
Tain . . . . .	1779	35	6	41	27	14	1515	46	3	49	35	1
Stornoway . . . . .	2587	79	4	83	61	12	6081	240	2	242	112	23
Inverness . . . . .	12509	418	26	444	359	122	3653	76	11	87	91	10
Nairn . . . . .	3435	116	10	126	112	23	1051	24	14	38	39	4
Elgin . . . . .	7543	173	32	205	160	41	2323	65	13	78	45	11
Forres . . . . .	3508	89	35	124	89	23	604	19	1	20	12	2
Banff . . . . .	6781	209	28	237	163	32	959	23	3	26	10	2
Cullen . . . . .	1818	54	12	66	33	9	1728	52	7	59	18	14
Keith . . . . .	4144	116	32	148	68	16	1798	38	10	48	18	5
Rathven (including Buckie) . . . . .	2798	122	12	134	71	24	2124	82	5	87	42	15
Fraserburgh . . . . .	3472	180	20	200	66	31	1039	17	11	28	10	4
Huntly . . . . .	3448	90	23	113	61	14	881	19	4	23	10	1
Inverurie . . . . .	2520	87	31	118	68	16	436	16	-	16	4	2
Kintore . . . . .	568	18	2	20	15	7	1039	29	8	37	11	3
Peterhead . . . . .	7541	282	27	309	160	55	2255	79	9	88	38	9
Bervie . . . . .	952	22	5	27	20	7	609	38	-	38	7	3
Dunnottar (including part of Stonehaven) . . . . .	910	23	5	28	21	4	918	30	4	34	10	5
*Fetteresso do. do. . . . .	2099	52	9	61	39	13	3428	33	10	43	37	10
Arbroath . . . . .	17593	645	70	715	450	132	238	12	3	15	9	2
Brechin . . . . .	7179	186	43	229	186	41	1631	33	4	37	15	8
Forfar . . . . .	9258	356	62	418	248	77	1580	38	16	54	26	14
Kirriemuir . . . . .	3275	81	24	105	98	20	4084	95	20	115	70	20
Monifieth (including part of Broughty Ferry) . . . . .	3195	143	7	150	90	17	1857	78	6	84	30	18
Montrose . . . . .	14563	430	26	456	326	102	1317	24	3	27	58	3
Alyth . . . . .	2106	39	9	48	45	17	1092	29	-	29	11	4
Auchterarder . . . . .	2844	66	13	79	41	10	1364	19	10	29	37	5
Blairgowrie . . . . .	3344	114	16	130	98	19	1079	18	2	20	25	5
Crieff . . . . .	3903	104	17	121	81	23	587	14	1	15	12	1
Culross . . . . .	517	12	2	14	8	4	906	32	4	36	14	5
Tulliallan (including Kincardine) . . . . .	2166	59	6	65	51	13	244	8	2	10	3	-
Anstruther-Easter . . . . .	1178	34	4	38	18	8	1	-	-	-	-	-
Anstruther-Wester . . . . .	367	9	-	9	7	4	71	2	1	3	-	1
Auchtermuchty . . . . .	1215	37	5	42	36	14	2070	51	11	62	19	1
Burntisland . . . . .	3143	94	10	104	51	21	527	17	3	20	3	1
Crail . . . . .	1211	28	2	30	28	3	720	30	1	31	9	3
†Cupar . . . . .	5029	143	15	158	120	36	1721	48	5	53	43	8
Dysart . . . . .	8066	263	18	281	159	74	776	31	3	34	7	1
Falkland . . . . .	1184	32	3	35	24	11	1753	51	5	56	28	9
Inverkeithing . . . . .	1817	55	4	59	30	12	1379	45	3	48	15	6
Kilconquhar (including Earlsferry) . . . . .	395	10	-	10	4	-	2036	42	6	48	28	8
Kilrenny . . . . .	2145	90	3	93	46	11	365	9	1	10	4	1
Kinghorn . . . . .	1426	46	4	50	48	17	923	29	5	34	39	2
Kirkcaldy . . . . .	10841	356	19	375	227	79	276	22	-	22	5	-
Leslie . . . . .	2264	95	16	111	54	28	2068	13	2	15	7	1
Newburgh . . . . .	2281	84	12	96	54	13	412	7	1	8	10	2
Pittenweem . . . . .	1671	47	7	54	35	9	39	2	-	2	1	-
St. Andrews and St. Leonards . . . . .	5176	130	9	139	115	44	2429	56	10	66	35	5
Scoonie (including Leven) . . . . .	2723	62	3	65	33	25	534	28	1	29	10	2
Kinross . . . . .	2083	41	5	46	28	6	566	23	3	26	5	6
Alloa . . . . .	6425	267	23	290	161	40	2442	85	8	93	53	11
Tillicoultry . . . . .	3684	89	18	107	69	12	1370	43	3	46	26	5
Alva . . . . .	3147	141	14	155	67	23	136	7	-	7	6	-
Campsie (including Lennoxton) . . . . .	3209	99	6	105	72	29	3274	90	7	97	59	24
Denny . . . . .	2428	81	9	90	46	22	2560	91	8	99	60	20
Kilsyth . . . . .	4692	196	20	216	234	34	1420	43	8	51	28	2
St. Ninians (including Bannockburn) . . . . .	2258	82	5	87	64	17	4390	161	12	173	92	18
Stirling . . . . .	13707	425	52	507	367	153	305	7	-	7	1	-
Bonhill (including Alexandria) . . . . .	7007	237	22	259	141	71	2052	95	6	101	62	11
Cardross (including Renton) . . . . .	2891	112	9	121	77	22	1277	37	3	40	26	4
Dumbarton . . . . .	8253	514	27	541	261	90	15	5	1	6	5	1
Kirkintilloch . . . . .	6096	179	31	210	140	31	2083	83	5	88	43	12
Old or West Kilpatrick (including Duntocher) . . . . .	2360	66	1	67	51	14	3217	95	5	100	100	20
Row (including Helensburgh) . . . . .	4613	165	12	177	113	32	1721	33	2	35	21	7

\* Fetteresso.—Four of the Illegitimate Births, and six of the Deaths in the Landward District, took place in the Combination Poorhouse, and relate to persons belonging to other parishes.

† Cupar.—Twenty-one of the forty-three Deaths in the Landward Dist. occurred in the Fife and Kinross Asylum.



DISTRICTS.	TOWN (or Burgh).						LANDWARD.					
	Popula- tion, 1861.	BIRTHS.			DEATHS.	MARRIAGES.	Popula- tion, 1861.	BIRTHS.			DEATHS.	MARRIAGES.
		Legit.	Illegit.	Total.				Legit.	Illegit.	Total.		
Campbeltown . . . . .	6033	185	20	205	157	33	2116	40	3	43	46	9
Dunoon and Kilmun . . . . .	2968	79	1	80	73	18	2493	69	4	73	40	9
Inveraray . . . . .	972	26	1	27	12	8	678	14	3	17	20	1
Kilmore and Kilbride (including Oban) . . . . .	1940	79	5	84	66	17	1022	20	1	21	17	9
Rothsay . . . . .	7122	168	20	188	214	53	-	-	-	-	-	-
Johnstone . . . . .	6404	247	20	267	150	57	1738	62	3	65	44	19
Eastwood (including Pollokshaws) . . . . .	7648	308	31	339	293	68	3666	126	7	133	83	22
Gourock . . . . .	2076	80	5	85	71	16	231	2	-	2	-	-
Kilbarchan . . . . .	2530	64	11	75	54	19	3818	139	7	146	101	12
Port-Glasgow . . . . .	7214	400	35	435	290	93	80	-	-	-	-	-
Renfrew . . . . .	3228	146	8	154	92	18	1422	66	3	69	40	9
Old Ardrossan (including Saltcoats) . . . . .	4778	147	8	155	115	46	378	4	-	4	4	-
New Ardrossan (including Ardrossan) . . . . .	2896	119	7	126	54	20	350	6	-	6	1	-
Ayr . . . . .	18573	545	84	629	523	119	1086	23	3	26	12	3
Beith . . . . .	3420	127	11	138	135	21	2355	88	7	95	49	16
Dalry . . . . .	4232	162	10	172	99	20	6924	316	15	331	178	38
Dundonald (including Troon) . . . . .	2427	70	3	73	55	16	2267	48	6	54	30	11
Galston . . . . .	3228	173	9	182	85	21	2026	80	10	90	33	7
Girvan . . . . .	5921	123	34	157	97	30	1132	25	1	26	11	7
Irvine . . . . .	7060	237	23	260	166	61	1547	52	11	63	71	3
Kilbirnie . . . . .	3245	127	11	138	83	32	2020	68	6	74	22	5
Kilmarnock . . . . .	22619	794	73	867	631	182	2853	93	7	100	54	16
Kilwinning . . . . .	3921	112	4	116	110	23	3796	137	10	147	76	10
Largs . . . . .	2638	63	3	66	46	9	982	40	4	44	13	13
Loudoun (including Newmilns) . . . . .	3857	118	7	125	72	31	983	52	6	58	20	15
Maybole . . . . .	4115	114	16	130	82	14	2598	61	14	75	32	19
Muirkirk . . . . .	2281	101	9	110	52	13	989	9	3	12	3	3
Old Cumnock . . . . .	2316	109	10	119	63	31	1405	33	7	40	17	7
Sorn (including Catrine) . . . . .	2484	88	5	93	73	20	1558	48	6	54	27	9
Stevenston . . . . .	2704	128	14	142	96	11	1122	8	-	8	5	3
Stewarton . . . . .	3145	93	21	114	79	33	1304	33	3	36	13	4
Avondale (including Strathaven) . . . . .	4085	117	17	134	85	38	2040	51	5	56	27	14
Maryhill . . . . .	3717	185	10	195	127	37	1369	66	6	72	48	5
*Springburn . . . . .	c. 2500	232	7	239	125	29	c. 2661	63	14	77	432	14
Bothwell (including Bellshill) . . . . .	2945	177	10	187	69	26	4114	147	7	154	115	20
Cambusnethan (part of)—(including Wishaw) . . . . .	6112	455	26	481	197	64	7265	290	14	304	149	46
Carluke . . . . .	3111	119	16	135	93	40	3065	114	14	128	68	14
Larkhall . . . . .	2685	204	9	213	77	36	944	12	-	12	6	3
†Dalziel (including Motherwell) . . . . .	2925	229	11	240	154	22	2513	198	8	206	95	14
Govan . . . . .	7637	613	13	626	334	142	6088	486	19	505	311	80
‡Partick . . . . .	8183	631	17	648	374	141	6676	135	-	135	152	61
Hamilton . . . . .	10688	388	33	421	235	89	3359	188	9	197	82	28
Lanark . . . . .	5047	150	24	174	160	31	2844	60	6	66	64	15
Old Monkland—Middle Dist. (incl. Coatbridge) . . . . .	10501	525	26	551	355	117	4802	202	9	211	150	30
Ditto Eastern Dist. (incl. Calderbank) . . . . .	2461	63	8	71	37	10	4847	264	17	281	171	15
Rutherglen . . . . .	8062	361	22	383	253	83	1273	27	-	27	19	3
Stonehouse . . . . .	2585	109	6	115	60	19	682	15	-	15	7	6
Bathgate . . . . .	4827	215	16	231	107	30	c. 607	72	7	79	29	27
Armadale . . . . .	2504	162	15	177	77	11	c. 2196	49	1	50	16	4
Borrowstounness . . . . .	3814	138	5	143	95	20	1884	63	2	65	25	4
Linlithgow . . . . .	3843	102	19	121	77	26	1941	43	9	52	52	5
Queensferry . . . . .	1230	56	8	64	46	9	161	-	-	-	-	-
Dalkeith . . . . .	5396	182	16	198	126	58	1718	46	4	50	46	25
Duddingston (including Portobello) . . . . .	4366	148	11	159	131	38	857	26	-	26	14	7
Inveresk (including Musselburgh) . . . . .	7423	226	22	248	196	66	2095	100	5	105	57	7
Dunbar . . . . .	3516	94	18	112	82	21	1428	38	8	46	29	6
Haddington . . . . .	3897	129	10	139	127	43	1651	37	2	39	32	6
North Berwick . . . . .	1164	40	4	44	39	12	907	16	2	18	9	2
Tranent . . . . .	2257	95	12	107	69	25	2390	90	10	100	55	12
Dunse . . . . .	2556	57	10	67	52	4	1039	37	1	38	16	7
Lauder . . . . .	1137	25	5	30	24	9	1061	35	5	40	20	5
Peebles . . . . .	2045	68	13	81	48	18	805	26	8	34	19	1
Galashiels . . . . .	6433	341	36	377	203	68	577	20	4	24	9	5
Selkirk . . . . .	3695	116	14	130	69	18	1044	27	3	30	15	1
Hawick . . . . .	8191	365	49	414	280	76	588	8	1	9	1	1
Jedburgh . . . . .	3428	97	15	112	88	21	1583	37	8	45	26	10
Kelso . . . . .	4309	105	14	119	101	22	883	12	-	12	10	2
Annan . . . . .	3473	102	25	127	81	19	1640	38	10	48	22	12
Dumfries . . . . .	14023	420	65	485	367	92	3117	69	15	84	65	13
Lochmaben . . . . .	1194	38	9	47	34	4	1893	39	8	47	35	13
Sanquhar . . . . .	1754	34	7	41	29	15	1004	28	2	30	8	13
Kells (including New Galloway) . . . . .	462	9	2	11	12	1	708	20	2	22	8	4
Kirkcudbright . . . . .	2552	71	11	82	80	9	855	18	3	21	13	4
Penninghame (including Newton-Stewart) . . . . .	2535	58	13	71	50	11	1526	28	10	38	16	8
Stranraer . . . . .	6273	155	32	187	131	33	42	-	-	-	-	-
Whithorn . . . . .	1623	46	11	57	38	7	1311	35	6	41	31	4
Wigtown . . . . .	2027	44	9	53	40	6	610	14	2	16	8	3

\* Springburn.—Thirteen of the fourteen Illegitimate Births, and 394 of the 432 Deaths, in the Landward District, took place in Barnhill Poorhouse.

† Dalziel.—Five of the eleven Illegitimate Births in the Town District took place in Motherwell Poorhouse, the mothers belonging to other parishes.

‡ Partick.—Eighty of the 152 Deaths in the Landward District occurred in the Gartnavel Lunatic Asylum.



# APPENDIX.

## EXTRACTS FROM THE REGISTRARS' NOTES RELATIVE TO THE WORKING OF THE VACCINATION ACT.

### I. NORTHERN DIVISION.

#### 1. SHETLAND.

3. (2.) SANDWICK AND CUNNINGSBURGH.—Of the 66 births registered during 1868, there are still twelve unaccounted for, although it is quite possible they may have been vaccinated; but from some of the parents not having money at the time to pay the vaccinator's fee, they do not get delivery of the certificate. In some cases the certificate has not been handed in until nearly a year after the operation has been performed.

4. (1.) FETLAR.—The same drawbacks that have been noticed in former returns still exist. It is not without cause the poor parents complain loudly of being under the necessity of exposing their infants to the risk of being carried not only miles of land road, but also across dangerous sounds to a distant island. In many cases the health of the mother is seriously injured.

12. (3.) PAPA-STOUR.—Vaccination has been more regularly attended to for the year 1868, than during previous years. One great barrier to the working of the Act here is, the poverty of the people. Out of 23 cases of vaccination, on one occasion 20 of the parties had to borrow the money to pay the vaccinator, and in several cases could not obtain it. I have before recommended a system of parish assessment for the purpose, when vaccination, the same as registration, would go on regularly without murmur or delay.

#### 2. ORKNEY.

17. FIRTH AND STENNES.—The Act is well attended to, but costs the Registrar as much trouble as the Registration Act does, consequently the remuneration is far from adequate.

29. SOUTH RONALDSHAY.—The Act works well, and the people seem willing to have their children vaccinated.

30. STROMNESS.—The Act is strictly attended to, and works smoothly.

### II.—NORTH-WESTERN DIVISION.

#### 5. ROSS AND CROMARTY.

##### *Mainland.*

66. (1.) NORTHERN DISTRICT OF GAIRLOCH.—The cause of the five not being vaccinated is,

that the vaccinator has been confined for six weeks by typhus fever, and no other person has been appointed in his place.

66. (2.) SOUTHERN DISTRICT OF GAIRLOCH.—The operation of the Act is still very irregular. The people are become indifferent as to the time of sending in the certificates, one of which was received on 3d January 1870, the child for which it was granted being then 21 months old, and this notwithstanding that the time was prolonged from six to twelve months. The parents of the seven children marked in col. 7 rest their defence on the vaccinator's illness, he being confined for some time back, and still lies dangerously ill; no other vaccinator being nearer than Ullapool, which is from 30 to 50 miles distant from some parts of this parish. Unless the Parochial Board takes action, and uses more stringent measures against defaulters, the Act will soon become a dead letter in Gairloch.

74. LOCHALSH.—There is no improvement in the working of the Act—indeed, quite the reverse, as the large number of entries (12) for whom no certificates have as yet been received fully testifies. It is not for me to say how this happens; I merely state the fact, and leave those most concerned to account for it.

75. LOCHBROOM.—The Act is much better attended to now than formerly. The vaccinator endeavours to do his duty willingly and faithfully, and the docile inhabitants are doing their best; but in such a wide and wild parish, many difficulties will occur to prevent punctual attendance in every case. The most of the cases in col. 7 will be vaccinated in course of a short time. Very few indeed escape without being vaccinated.

83. TARBAT.—The Act works very well, considering the distances many of the parents have to travel to meet the doctor. The fee presses pretty heavily on ploughmen and labourers.

##### *Insular.*

88. STORNOWAY.—The vaccinators are very attentive to their duties, and parents and guardians, in general, are paying great attention to the requirements of the Act.

#### 6. INVERNESS.

##### *Mainland.*

91. ARDERSIER.—The Act works pretty well,



yet in many cases notices have to be issued before the certified schedules are returned. This arises from the fact that, to save trouble on their own part, parents expect either the Registrar to remind them, or the medical practitioner duly to attend to the various cases within the statutory period.

97. (1.) GLENELG.—The prevalence of Measles was the cause of postponement in six cases. The Act is working well.

97. (2.) KNOYDART.—There being no medical officer in the parish at present accounts for there being no vaccinations for 1868.

97. (3.) NORTH MORAR.—There is considerable difficulty in getting some of the parents to comply with the requirements of the Act, eight of the 13 children whose births were registered in 1868 being as yet unvaccinated.

104. LAGGAN.—The two cases unaccounted for are twin children of a travelling musician, who were removed from the parish the second day after their birth, and where they cannot be discovered.

106. PETTY.—Vaccination, with few exceptions, is very regular.

### III.—NORTH-EASTERN DIVISION.

#### 7. NAIRN.

121. AULDEARN.—There was less difficulty in obtaining the returns for 1868 than for the previous years. Only two cases caused any great annoyance to the Registrar; the one in consequence of the ignorance of the parents, and the other on account of the child being ill for some time, and the number of Schedule B's required to be written for.

122. CAWDOR.—Cases requiring notices are considerably on the increase.

123. NAIRN.—Owing to the carelessness of parents, the proper carrying out of the spirit of the Act involves a vast amount of work most inadequately remunerated. After a five years' trial, I am still strongly of the opinion, that were the charge of one shilling made for every Registrar's notice (pursuant to sec. 17) when sent out, the Vaccination Act would be better attended to, and much time and trouble saved to all parties.

#### 8. ELGIN (OR MORAY).

131. DUFFUS.—Inconvenience is experienced on account of there being no resident medical practitioner in the parish.

132. (2.) ROTHENMURCHUS.—Vaccination well attended to. No case of default has yet occurred, but the Act requires to be strictly enforced.

#### 9. BANFF.

148. BOTRIPTHIE.—The Act works well, but Registrars have too little pay.

153. FORDYCE.—Parties seem wishful to comply with the statute, though somewhat inclined to procrastinate, and, in consequence, in not a few cases require the Registrar's notice served on them.

157. (1.) GLENLIVAT.—Vaccination generally well attended to; a few require the statutory notice to remind them.

164. RATHVEN.—The Act works fairly. The only objection is the insufficient remuneration, which ought to be at least sixpence for each entry.

#### 10. ABERDEEN.

182. COULL.—The schedules have been all got

in, the last one having been sent in shortly before the close of 1869. The mother was lost sight of for nearly a year.

194. FORGUE.—From the Registrar's experience of the working of the Act, he would suggest that some check be imposed upon the facilities for postponing vaccination.

199. GLASS.—The child removed from parish without being vaccinated was the illegitimate child of a farm-servant, who, along with the child, disappeared soon after the birth took place. There is no difficulty with the parents; they seem all quite willing to have their children vaccinated.

200. GLENBUCKET.—The Act is working very well, being now better understood.

210. KING-EDWARD.—The Act is all that could be desired, so far as it goes, with the exception of those perplexing postponements, for which the Registrars are underpaid, or rather not paid at all.

213. KINTORE.—The Act works remarkably well. The duties devolving on the Registrar through its operation are, however, very trying, and the payment for the work done is very inadequate.

214. LEOCHEL-CUSHNIE.—There are complaints on the part of parents that the medical practitioner requires to be called upon several times before he will vaccinate.

217. LOGIE-COLDSTONE.—Only one case has occurred in the experience of the Registrar, of a parent delaying the vaccination of his child on the ground of entertaining objections to it; but it is becoming more and more the practice with parents to neglect the requirements of the Act, till they receive the statutory notice from the Registrar.

220. LUMPHANAN.—The only difficulty that has ever occurred in working the Act, was the complaint of the poorer classes of the charges of the medical practitioners, who, on their part, were rather unwilling to go perhaps a good distance, when there was but little prospect of payment. To obviate the difficulty, the Registrar arranged with the vaccinator to attend several times a year at a central part of the parish, and vaccinate all the children of the labouring classes who should be brought to him, at a fee of 1s. 6d. prepaid. The arrangement is giving great satisfaction to both parties, as the poor get their children vaccinated at little cost, and the medical practitioner, though the fee be small, is sure of it, and it saves the Registrar from a good deal of trouble in sending notices.

233. PITSLIGO.—The Act still continues to work badly. The postponements for 1867 were 24; for 1868, 22; and for 1869, 33. As was remarked last year, a certificate of successful vaccination is rarely received without first sending a notice to the parents, and, as noted above, in 33 instances out of 78 during the year just closed, Schedule B has been returned. This, too, is always done within the prescribed ten days (sometimes at the very last hour), so that the Registrar has had no opportunity of lodging a complaint with the Parochial Board, which might have the effect of causing a little more punctuality to be observed. There is sometimes a suspiciously short interval between the dates of Schedules A and B. In one case a notice was sent to the parents on the 29th October; Schedule B was returned dated November 6th, and Schedule A November 22.

238. SKENE.—There is often trouble in getting in the schedules. Much of this would be avoided if the vaccinator were paid by the Parochial Board, as the Registrar is paid, and not by the parents themselves.



## 11. KINCARDINE.

251. (1.) BANCHORY-DEVENICK.—Vaccination attended to with punctuality.

266. NIGG.—The entry in col. 7 was that of a child which was removed to England previous to vaccination.

## IV. EAST-MIDLAND DIVISION.

## 12. FORFAR.

282. (1.) ST. PETER (DUNDEE).—The Act is working satisfactorily. Out of the total of 891 births, 783 have been successfully vaccinated; whilst of the balance, 94 have died before vaccination, 5 have been certified as insusceptible, and only 9 have left the district before vaccination.

282. (3.) ST. CLEMENT (DUNDEE).—The Act is very fairly observed, only  $3\frac{1}{2}$  per cent. of the children registered being unaccounted for. These children belong, without a single exception, to the more humble of the working classes, who in many instances have been obliged to emigrate from the town in search of employment. The Registrar continues of opinion that, if the time were restricted to three months, it would have a most beneficial effect; he observes, also, that the children of the better classes are invariably vaccinated before that time.

282. (4.) ST. ANDREW (DUNDEE).—The Act continues to work well. During the agitation in England, occasional depreciatory remarks were made to the Registrar by parents, on receiving Schedule D; but on being apprised of the remarkable fact that Small-pox was virtually an extinct disease throughout Scotland, disapproval in most cases was turned to approval. The cases unaccounted for almost exclusively belong to the nomad portion of the lowest stratum of the labouring classes, who have migrated in search of work. Some of the postponements have run nearly eighteen months.

296. KINNELL.—Vaccination remarkably well attended to.

312. MONTROSE.—The vaccinations are well attended to, as the return shows, although many parents require notices sent to them. The Registrar may mention, as many others have done, that the remuneration is altogether inadequate to the work performed.

## 13. PERTH.

331. BALQUHIDDER.—The Act works pretty well. Parents seem to be alive to their duty under it. The chief difficulty is the distance to the vaccinator, which, with a tendency to leave vaccination undone to the last moment, leads to annoyance to vaccinators, parents, and Registrars, that might be avoided were an endeavour made to get the children vaccinated at the third or fourth month, before teething commences.

342. CRIEFF.—As a rule the Act works well. In most cases, if not all, where inattention is given, the parties have left the district.

380. METHVEN.—The four unaccounted for are the children of Irish labourers, whom it is sometimes most difficult to trace.

## 14. FIFE.

411. BURNTISLAND.—As will be seen by the return, the Act is being quite successfully carried out, the whole of the entries in the Birth Register for the year having been successfully accounted for.

420. CUPAR.—The Act works most satisfactorily.

426. DYSART.—The births of 333 children

were registered in 1868. Of these, 298 were successfully vaccinated, 32 died before vaccination, and in two cases the vaccination was postponed. In the remaining case, that of an illegitimate child, the mother left the district shortly after the child's birth and before it was vaccinated, and cannot be traced.

442. KIRKCALDY.—There is still a very great amount of trouble in getting from the parents the vaccination certificates; but, by taking this trouble, the Act has wrought very successfully, as the return will show. Of the 11 cases unaccounted for, the Registrar expects to get in certificates for seven.

453. ST. ANDREWS AND ST. LEONARDS.—The Vaccination Act works well on the whole, and is strictly attended to by the people, except in a very few instances.

459. WEMYSS.—The postponed case is that of a weakly child, running its fourth postponement.

## 16. CLACKMANNAN.

463. TILlicoultry.—The Act seems to work well.

## V.—WEST MIDLAND DIVISION.

## 17. STIRLING.

485. LARBERT.—Parents are all very attentive to their duties.

490. STIRLING.—The Act is still working well.

## 18. DUMBARTON.

495. CUMBERNAULD.—Some complaints occasionally of the injurious effects of vaccination in causing eruptions on head and body, and decline. In one case, a short time ago, the father of the child decidedly ascribed its death to vaccination. He brought the certificate of vaccination along with him when he came to register the death of the child.

503. ROW.—The disease of small-pox is now almost unknown amongst the youthful population of the parish. The Act is now cheerfully complied with. The working population now consider compulsory vaccination a great benefit.

## 19. ARGYLL.

*Mainland.*

505. (1.) ARARACLE.—The only circumstance to be noted in connection with the operation of the Act in this, as in all other country districts, is the amount of trouble it gives the Registrar for the small pittance allowed him for that trouble.

510. DUNOON AND KILMUN.—The schedules are now generally returned before the six months have elapsed. The list of defaulters last half-year had only three names on it.

513. INVERARAY.—There is only one case in which no certificate has been received.

517. (2.) DALAVICH.—There are two cases of successful vaccination in which medical certificates have been refused from non-payment of fees.

521. KILMARTIN.—Vaccination continues to be well attended to. The Registrar is very seldom under the necessity of issuing notices. The parishioners seem to be fully aware that vaccination is an incalculable boon to the country at large.

523. KILMORE AND KILBRIDE.—Vaccination has been suspended for the last six weeks, on account of the prevalence of measles.

526. LOCHGILPHEAD.—One of the parochial vaccinators died in June 1869, and at his death left a number of cases of successful vaccination



without certificates. The vaccinators complained several times during the year of the inefficiency of the lymph supplied from London.

531. (1.) SADDLE.—The entry in col. 7 is that of a defaulter from sheer neglect, who, although repeatedly warned of his duty by statutory letter and otherwise, the case also having been referred to the Inspector of Poor, continues refractory, and no certificate is yet obtained from him. The child in question was born November 2d, 1868. Another defaulter formerly reported has not yet sent any certificate regarding his daughter, born 16th July 1866.

534. (2.) STRACHUR.—The Act continues to operate successfully; but the Registrar has some trouble in working it, for which labour 2s. is, in his estimation, scarcely adequate remuneration.

535. TARBERT.—Parents are getting their children vaccinated willingly, the only grudge being the payment to the vaccinator.

*Insular.*

540. KILCHOMAN.—The Act continues to work satisfactorily, though the Registrar has occasionally to warn parents of the expiration of the six months, by sending statutory notices. Considering the amount of additional labour imposed upon Registrars by the Vaccination Act, the remuneration is quite inadequate.

551. (1.) TYREE.—Vaccination is performed at the 'convenient time,' without regard to the limitations of the Act. And the convenient time for parents and vaccinator seldom happens to coincide. The fee is the principal cause of the delay on the part of the people, and where, as here, they are mostly all very poor, and the Parochial Board has to pay, it gives the Registrar a great amount of trouble. The vaccinator having to attend to the medical wants of two islands, separated by a sound often impassable for weeks, and having a population of about 5000 inhabitants, cannot always be at hand when his services may be required for vaccination.

VI. SOUTH-WESTERN DIVISION.

21. RENFREW.

560. CATHCART.—It is difficult to get the medical men to send the papers, and the parents neglect to transmit them after they have received them. In this district there are remarkably few postponements.

564. (1.) MIDDLE DISTRICT OF GREENOCK.—Two children died from Small-pox. The one was 2 years old and born in Ireland, and the other was aged three months. They were *not vaccinated*.

564. (2.) EAST DISTRICT OF GREENOCK.—During the year two children, aged respectively about 4 years, who were born in Ireland, and never vaccinated, died from Small-pox.

565. HOUSTON AND KILLELLAN.—The constant changing of the labouring population is the reason why so many cases are entered in the column "Removed from the District before Vaccination, or otherwise unaccounted for," although when leaving the parents are particularly requested to send a certificate by post.

569. KILMALCOLM.—The four removals before vaccination are attributable to the migratory habits of the navvies who were working on the Greenock and Ayrshire Railway. The vaccinator of the parish is very assiduous in the discharge of his duties.

571. MEARNS.—In this district the only difficulty in the working out of the Vaccination Act, is the carelessness of parents and guardians.

The notices to defaulters are sent at the end of every month, so that, generally speaking, they are never more than a week or two behind.

574. PORT GLASGOW.—The number of postponements in this district is very great, 113 since this time last year. This may be accounted for, to some extent, from the fact that some of the medical men are in the habit of giving certificates of postponement instead of certificates of successful vaccination, when the parents are not able to pay the charge, 1s. 6d. The parents frequently leave the vaccination over till the six months allowed are expired, and postponement then becomes necessary, as the children then are frequently teething, so that it would be better were the time allowed shortened to four months.

22. Ayr.

583. COYLTON.—The Vaccination Act works well, the people being attentive to its observance. Many, however, demur to the payment of a vaccination fee, and a number pay nothing to the medical officer. It would have been better had the Act authorized the medical officer to uplift his fees from the registration assessment.

597. KILMARNOCK.—The Vaccination Act continues to work well, but it requires much attention on the part of the Registrar, otherwise it would be neglected by many. The greatest difficulty encountered is getting returns from those who remove from the district, in most of which cases the parties cannot be traced. The unaccounted for and removed during 1868 are 14, which is double the number of the previous year.

598. KILMAURS.—There is no difficulty in getting the provisions of the statute carried out.

609. OCHILTREE.—The working of the Act has hitherto been a complete success. Its influence is demonstrated by the fact, that for years there has not been a single case of Small-pox in the parish.

23. LANARK.

644. (3.) BRIDGETON (GLASGOW).—The vaccination certificates, as usual, have been well returned, there being only 53 removed from the district before vaccination or otherwise unaccounted for, out of 2198 births. During the year, there were no cases of Small-pox.

644. (9.) TRADESTON (GLASGOW).—For 1868 there are only 23 defaulters out of 1897 entries. Having come across the following interesting paragraph relative to vaccination in an address delivered by Dr. Valentine, physician to His Highness the Maharajah of Jeypore, India, I have taken the liberty to extract it. He says: 'One peculiar feature attending the labours of the medical missionary in that part of the country, was the readiness with which the women came forward of their own accord to have their children vaccinated.' (*Vide* 'United Presbyterian Missionary Record' for December 1869.)

652. (3.) EASTERN DISTRICT OF OLD MONKLAND.—The dulness of the iron trade during the year 1868 was the cause of five families leaving the county, which necessitated the sending of 40 vaccination notices. This is some proof of the arduous duties entailed upon the Registrar.

654. RUTHERGLEN.—The Vaccination Act continues to work well, though many of the parents require notices sent them, in order that the schedule may be returned within the specified time. One man has absolutely refused to get his child vaccinated, and the case has been handed over to the Parochial Board.

656. STONEHOUSE.—Vaccination is extremely well attended to.



660. WISTON AND ROBERTON.—At times it is rather troublesome to get the statutory provisions complied with, and much attention is required to get the parties to return the schedules in time. And all for *threepence* each!

## VII.—SOUTH-EASTERN DIVISION.

### 25. EDINBURGH.

689. INVERESK AND MUSSELBURGH.—As stated in my last report, the period of six months seems too long, and allows many to get away from the district.

695. NEWBATTLE.—The Registrar frequently does not receive the certificate of successful vaccination till long after date, owing to the medical men retaining it till they enforce payment of their account. The medical men are extremely remiss in regard to certificates of all sorts. For example, the Registrar has to-day received a successful vaccination certificate in which the doctor has only filled in the child's name, dated and signed the schedule, without giving the father's name, residence, or the district and county of birth. One in fifty of the medical certificates (Schedule G) is not received till a requisition is sent. All this entails endless and unrequited trouble on Registrars.

### 26. HADDINGTON.

725. YESTER.—The certificates have been punctually delivered to me within the time prescribed.

### 27. BERWICK.

730. CHIRNSIDE.—The Vaccination Act continues to work well. During the past year the Registrar had only to send one notice, which was instantly attended to.

733. COLDSTREAM.—The Vaccination Act is working remarkably well; even parties who have removed to England are careful to send certificates of vaccination, though performed by English practitioners.

736. EARLSTON.—In most cases the requirements of the Vaccination Act have been complied with within the statutory period.

748. LAUDER.—No part of the Registrar's work costs so much trouble as the Vaccination Act. Every now and again a day has to be devoted towards hunting up defaulters.

### 28. PEEBLES.

766. MANOR.—The Vaccination Act is strictly

attended to, there having been no defaulters in any one case since the new system of vaccination came into operation.

771. TRAQUAIR.—A few cases occurred requiring notices, but the parents generally blamed the medical attendant.

## VIII. SOUTHERN DIVISION.

### 30. ROXBURGH.

787a. ECKFORD.—The Registrar has considerable difficulty in getting the certificates lodged within the statutory period, the parents saying that the fault lies with the doctor, who is not at home when they go with the child for vaccination. One told me that his wife had been once at Jedburgh and twice at Kelso before she could get the operation performed.

790. HOBKIRK.—As regards the vaccination of their children, parents are very attentive.

811. YETHOLM.—A medical man being stationed in the parish, the schedules are regularly sent in.

### 31. DUMFRIES.

828. HALF-MORTON.—With one exception, I have had no difficulty in getting the vaccination certificates; but there is a tendency to postpone the vaccination to the limit of the time allowed.

840. LOCHMABEN.—Parents appear not to take so much trouble upon themselves as in former years, and thus greater attention on the part of the Registrar is required.

850. TORTHORWALD.—Among the labouring population there is general murmuring at being obliged to carry their infants, during all seasons, so far as Dumfries, and, in addition, to have to pay two shillings or half-a-crown to the vaccinator. A number have required to be served with the statutory notices.

### 32. KIRKCUDBRIGHT.

858. BORGUE.—The Vaccination Act has worked well.

862. CORSOCK BRIDGE.—The Vaccination Act is still working well.

### 33. WIGTOWN.

901. WIGTOWN.—Vaccination is generally well attended to, but a few require to be reminded by having notice sent them. The two postponements are in consequence of the children having skin disease.